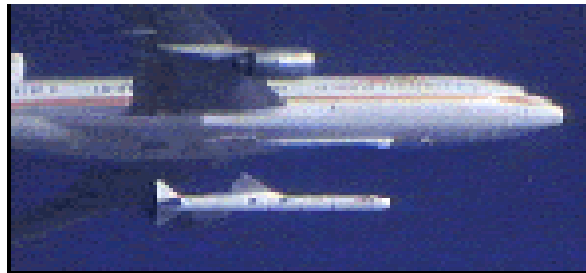




John F. Kennedy Space Center

LAUNCH SERVICES PROGRAM



Pardon the Interruption Meeting July 2008

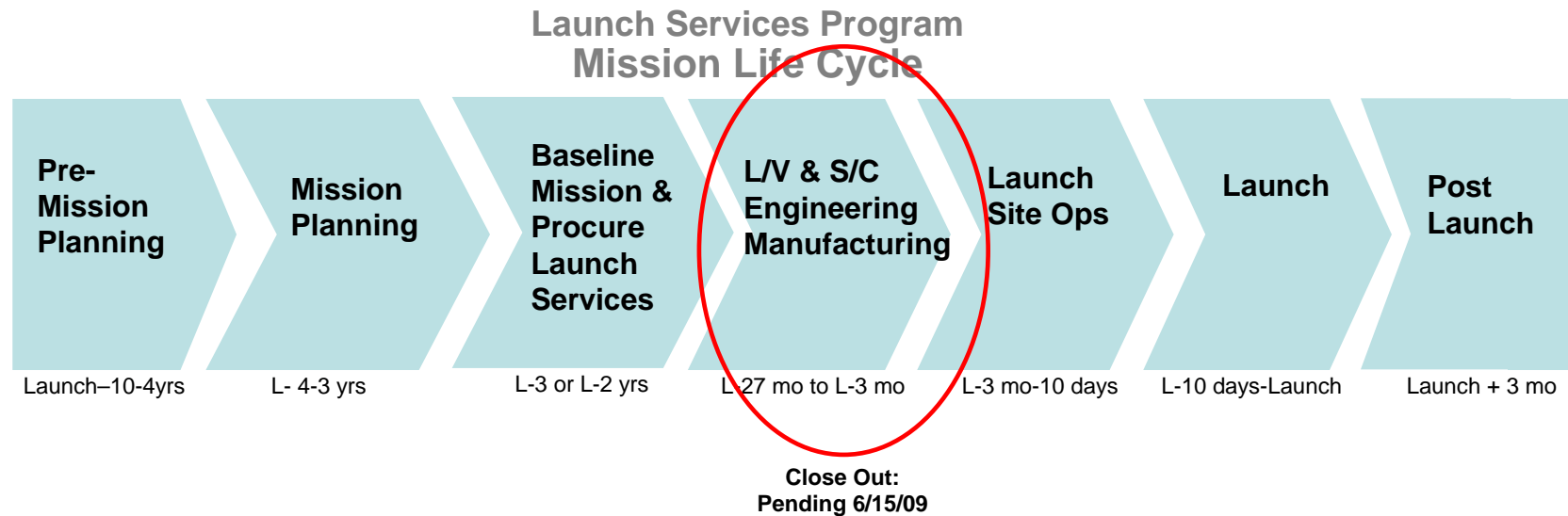


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MSL

Launch Date: 9/15/09





John F. Kennedy Space Center

MSL Project Summary

LAUNCH SERVICES PROGRAM

Mission	MSL
Launch Date	2009/09/15
Launch Vehicle	Atlas V
Launch Period Window	TBR/Time/Instant./dual daily
PPF	PHSF

	May	Jun	Jul
OVERALL MISSION	R	R	R

MISSION MANAGEMENT

Observatory Status
Manifest/Range
Integrated Schedule
ICD
CDRLs (S/C & LSC)

	May	Jun	Jul
	Y	Y	Y
	G	G	G
	G	G	G
	G	G	G
	G	G	G

LAUNCH SITE

LSSP
Customer Inputs
PPF
Launch Site Unique
Spacecraft OPS

	May	Jun	Jul
	G	G	G
	G	G	G
	G	G	G
	G	G	G
	0	0	0

SAFETY & MISSION ASSURANCE

Mission Assurance
Safety
Quality
Reliability

	May	Jun	Jul
	Y	G	G
	G	G	G
	G	G	G
	G	G	G

ENGINEERING

Launch Vehicle
Mission Specific
Certification
Mission Analysis
ERS/ERB
Launch PAD/GSE
Mission Unique IV&V

	R	R	R
	Y	Y	Y
	G	G	N/A
	Y	Y	Y
	Y	Y	Y
	R	R	Y
	0	0	0

COMM & TELEMETRY

Communications
Telemetry

	G	G	G
	0	0	0

BUSINESS

Budget
Contracts

	G	G	G
	G	G	G

DOWNRANGE TELEMETRY

Ground Stations
Deployables
P-3/OTTR

	0	0	0
	0	0	0
	0	0	0

NUCLEAR

Launch Approval
LV Data Books
Security
Radiation Safety
Facility

	G	G	G
	G	G	G
	G	G	G
	G	G	G
	G	G	G

LEGEND

Proceeding on Plan
Area of Concern
Significant Problem
Not Evaluated
Not Applicable

G
Y
R
0
N/A

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MSL - Open/Accepted Risks

LAUNCH SERVICES PROGRAM

		Condition
RYG Trend	RiskID	Consequence
Y	M0244	MSL mass growth has significantly decreased launch vehicle performance margins which are used to provide MSL with launch opportunity days and finite launch windows.
		Increased probability of degraded daily launch window and launch period durations for the MSL 2009 launch opportunity.
R	M0269	Lower Environmental Control System mission unique design has 50% margins at PDR timeframe.
		Inability to provide cooling for the MMRTG would delay mission.
Y	M0266	MSL spacecraft GN2 and battery cooling requirements remain undefined.
		LV engineering products and implementation may not meet milestones, or costs may be very high.
Y	M0271	Firm critical ECS power supply fault tolerance requirements are not defined.
		Range Safety may require extensive GSE modifications which would delay MSL mission.
Y	M0270	MSL target specification delivery may be late.
		Atlas trajectory design may be delayed.

P
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R
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5
91-100%
4
51-90%
3
11-50%
2
6-10%
1
1-5%



1 2 3 4 5
IMPACT

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MSL - Actions / Issues / Concerns

LAUNCH SERVICES PROGRAM

There are no Actions.

Mission Summary Map	G/Y/R	ISSUES / CONCERNS	WI/ERS/Risk/ Problem	Open Date	Due Date
Engineering	0	Additional requirements not captured in LSTO are resulting in unplanned task order. Items include: spacecraft 28v power, additional lightning suppression assembly requirements that are out of scope of original proposal.	WI	3/1/07	
Engineering	0	RP Tank Long Term Redesign	ERS-06-305	7/01/07	4/1/08
Business	0	ULA has begun to request extensions to the normal 30 day turnaround time for proposals on almost every Statement Of Work, with varying rationale. It appears that this is becoming the norm rather than a trend. The extensions may begin to affect schedule if they continue (GN2 SOW).	WI	11/30/2007	01/31/2008
Overall Mission	0	MSL battery capacity and time from launch to eclipse exit may impact launch window and the ability to recycle	WI	02/15/2008	

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MSL - Significant Events

LAUNCH SERVICES PROGRAM

Accomplished	
MSL verification matrix TIM June 5 in Denver in preparation for ICD being available for signature on June 30.	06/30/2008-06/30/2008

Planned	
Spacecraft mass is currently at 4066 kg per Project documentation in June 2008. (Yellow for observatory status.)	09/15/2006-06/30/2008
A MUPDR reconvene is required due to inadequate requirements definition in several areas at MUPDR. MUPDR reconvene will occur is TBD due to changes in s/c requirements and loss of ULA personnel.	09/13/2007-07/31/2008
Telecon to discuss JPL waiver to perform random vibe completed on April 14, 2008. Working to close out final set of ULA and KSC questions regarding JPL plan.	04/14/2008-06/30/2008
Spacecraft informed KSC of a significant requirements change in the GN2 Purge and Battery Cooling requirements. Telecons in work to determine new implementation and impact to schedule. Will further delay MUPDR reconvene as issue is resolved.	05/01/2008-06/30/2008
Late delivery of the updated s/c model has caused the MICD schedule to be compacted leading to ICD signature on 6/30/08. (Yellow for S/C deliverables.)	05/15/2008-06/13/2008
GOWG #5	08/06/2008-08/07/2008

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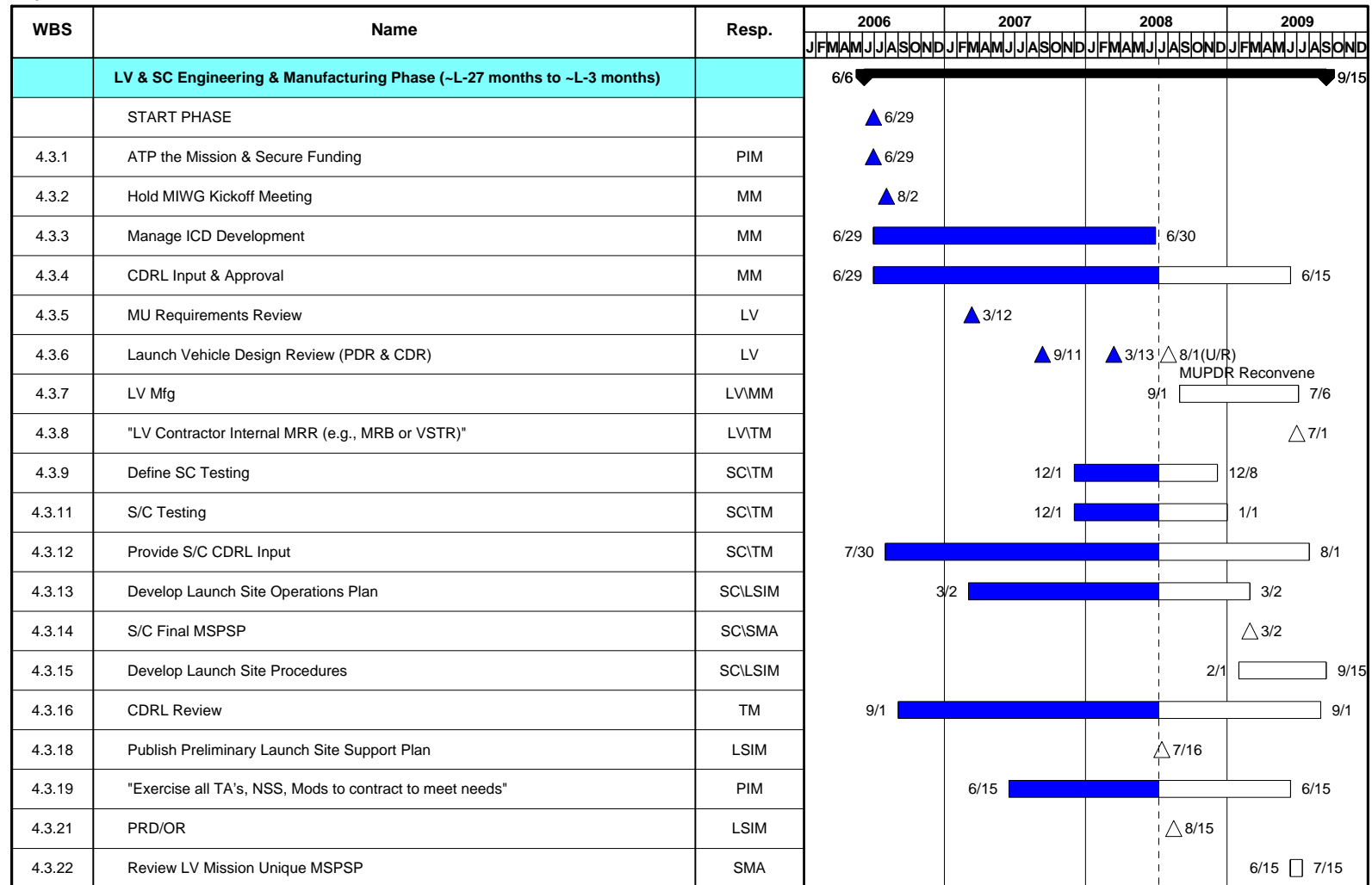
6

MSL BOSS Schedule

LSP-F-330.02 Basic

Page 1 of 2

7/8/08



TM = Technical Management

HQ = NASA HQ & Mission Directorate

LD = Launch Director

LSP = LSP Mgmt

LSIM = Launch Site Integration Manager

LSTO = LSTO (Mini Source Board)

LV = Launch Vehicle Contractor

MM = Mission Manager

PIM = Program Integration Manager

SC = Spacecraft Project

SMA = Safety & Mission Assurance

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LSP-F-330.02 Basic

7/8/08

TM = Technical Management	HQ = NASA HQ & Mission Directorate	LD = Launch Director	LSP = LSP Mgmt
LSIM = Launch Site Integration Manager	LSTO = LSTO (Mini Source Board)	LV = Launch Vehicle Contractor	MM = Mission Manager
PIM = Program Integration Manager	SC = Spacecraft Project	SMA = Safety & Mission Assurance	



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MSL Mission Management

Tammy Harrington

LAUNCH SERVICES PROGRAM

Mission

Launch Date

Orbit Requirement

Launch Vehicle Class

Launch Period Window

PPF

Mass (kg)

PAD

MSL
2009/09/15
C3: 23-11 (max/min) km/sec^2
Atlas V
TBR/Time/Instant./dual daily
PHSF
4000kg
SLC 41



ICD

May	Jun	Jul
G	G	G

There are no signed
SCNs

There are no SCNs in
Review

Observatory Status

Observatory Status

Schedule

Budget

Deliverables

Testing

ATLO

Instrument

May	Jun	Jul
Y	Y	Y
Y	R	R
G	G	G
0	Y	Y
0	0	0
0	0	0
0	0	0

Launch Vehicle Status

Integrated Schedule

CDRLs (S/C & LSC)

Manifest/Range

Ground Stations

Deployables

P-3/OTTR

G	G	G
G	G	G
G	G	G
0	0	0
0	0	0
0	0	0

Mission Center:

Program:

PM

LVI

MM

IE

LSIM

PIM

MAM

MCE

MTE

JPL
Mars
Richard Cooke
Dave Woerner/Jim Colvin
Tammy Harrington
Jim Behling
John Hueckel
Harold Coleman
Laura McDaniel
Marty Loughheed
Rolando Nieves

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MSL - Engineering

Jim Behling

LAUNCH SERVICES PROGRAM

	May	Jun	Jul
Launch Vehicle	R	R	R
Payload Fairing	G	G	G
First Stage	G	G	G
Second Stage	G	G	G
Third Stage	0	0	N/A
Payload Attach Fitting	G	G	G
Other	0	0	0
Mission Specific	Y	Y	Y
Certification	G	G	N/A
Mission Analysis	Y	Y	Y
ERS/ERB	Y	Y	Y
Launch PAD/GSE	R	R	Y
Mission Unique IV&V	0	0	0

REQUIREMENT VERIFICATION STATUS	
NUMBER OF REQUIREMENTS	0
VERIFIED TO DATE	0

LAUNCH PAD / GSE MODS (IF APPLICABLE)
Lower PLF ECS
Access Platforms
VIF Level 5 Structural Support
Clean Enclosures
GN2 Purge Upgrades
Aeroshell ECS
Pad Pneumatic GN2 Flow Path Redundancy

MISSION UNIQUE STUDIES (IF APPLICABLE)
There are none.

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MSL - Mission ERB Status

Jim Behling

LAUNCH SERVICES PROGRAM

R/Y/G	ERS #	TITLE	ERB Req?		Board Held?			Closure		
			Y	N	Y	N	N/A	AI	ENG.	OCE
0	05-354	MSL IRD Review	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0	06-370	MSL Mission Unique Requirements Review	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	06-371	MSL Mission Peculiar Design Review	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	06-372	MSL Mission Unique PDR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	06-373	MSL Mission Unique CDR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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MSL - Vehicle ERB Status

Jim Behling

LAUNCH SERVICES PROGRAM

R/Y/G	ERS #	TITLE	ERB Req?		Board Held?			Closure		
			Y	N	Y	N	N/A	AI	ENG.	OCE
0	06-305	RP Tank Long Term Redesign	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	ERS-07-265	First Flight of Basotect/MA100 foam FAP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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MSL - Launch Site

John Hueckel

LAUNCH SERVICES PROGRAM

LSSP

May Jun Jul

G	G	G
---	---	---

LSSP	Planned	Released
Preliminary	08/15/2008	
Baseline	03/16/2009	

CUSTOMER INPUTS

May Jun Jul

G	G	G
---	---	---

DELIVERABLES

May Jun Jul

Security and Badging
Training and Personnel Cert
Contingency Plans
Safety LSIM
Radiation Control
Operational Plans

G	G	G
G	G	G
G	G	G
G	G	G
G	G	G
G	G	G

UNIQUE REQUIREMENTS

LAUNCH SITE UNIQUE

Planetary Protection
Verification laboratory

May Jun Jul

G	G	G
G	G	Y

PPF

Trailer for Spin operations

G	G	G
G	G	G

Spacecraft OPS

0	0	0
---	---	---

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MSL Budget Breakdown

Harold Coleman

LAUNCH SERVICES PROGRAM

The launch service budget includes:

* **Launch Services**

- Standard launch Vehicle Services provided by this contract. This line item is firm fixed price and has no flexibility.

* **Mission Uniques**

- Requirements necessary to customize basic vehicle hardware to meet unique s/c driven requirements.
- Other services directly attributable to the mission.
- Contains some flexibility except when technical risk is affected. Spacecraft requirements are the cost driver.

* **Integrated Services**

- LSP contractor support service (ELVIS, CAPPs, JBOSC, KICs, etc).
- USAF range costs attributable to the mission
- Limited flexibility

* **Payload Processing Facility**

- Government facility: spacecraft customers are required to be processed in a government facility if the mission is planetary or has nuclear requirements
- Commercial facility: all other missions have been directed to process in a commercial facility;
- Contains some budget flexibility. Additional spacecraft cleanliness requirements or hazardous requirements may increase PPF costs.

* **Telemetry**

- Assets required to meet minimum launch vehicle telemetry requirements.
- Includes fixed and deployable ground stations, instrumented aircraft, and ocean assets.
- Limited flexibility requirements are often set late in the integration cycle.

* **Fly Out**

- Costs that each mission in the 19-Pack must incur.
- Long lead material procurement to mitigate risks due to gaps in production and supplier orders.
- Post-production support for labor skill retention, procure, manufacture, store and maintain under configuration control, mission critical spare parts.
- Pad Sustainability costs for SLC-2 and SLC-17.
- No flexibility-contract costs

* **Nuclear**

- RTG/RHU processing
- RTG/RHU databooks and approval
- Limited flexibility

* **Reimbursable**

- Reimbursable FC for transportation, labor, and CMO.

* **Mission Flexibility**

- Portion of the mission budget available for funding additional task assignments, non-standard services or meeting unexpected requirements.

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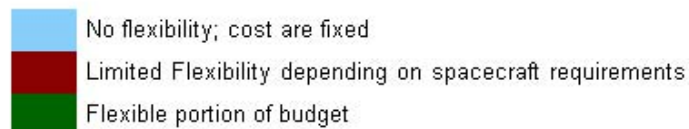
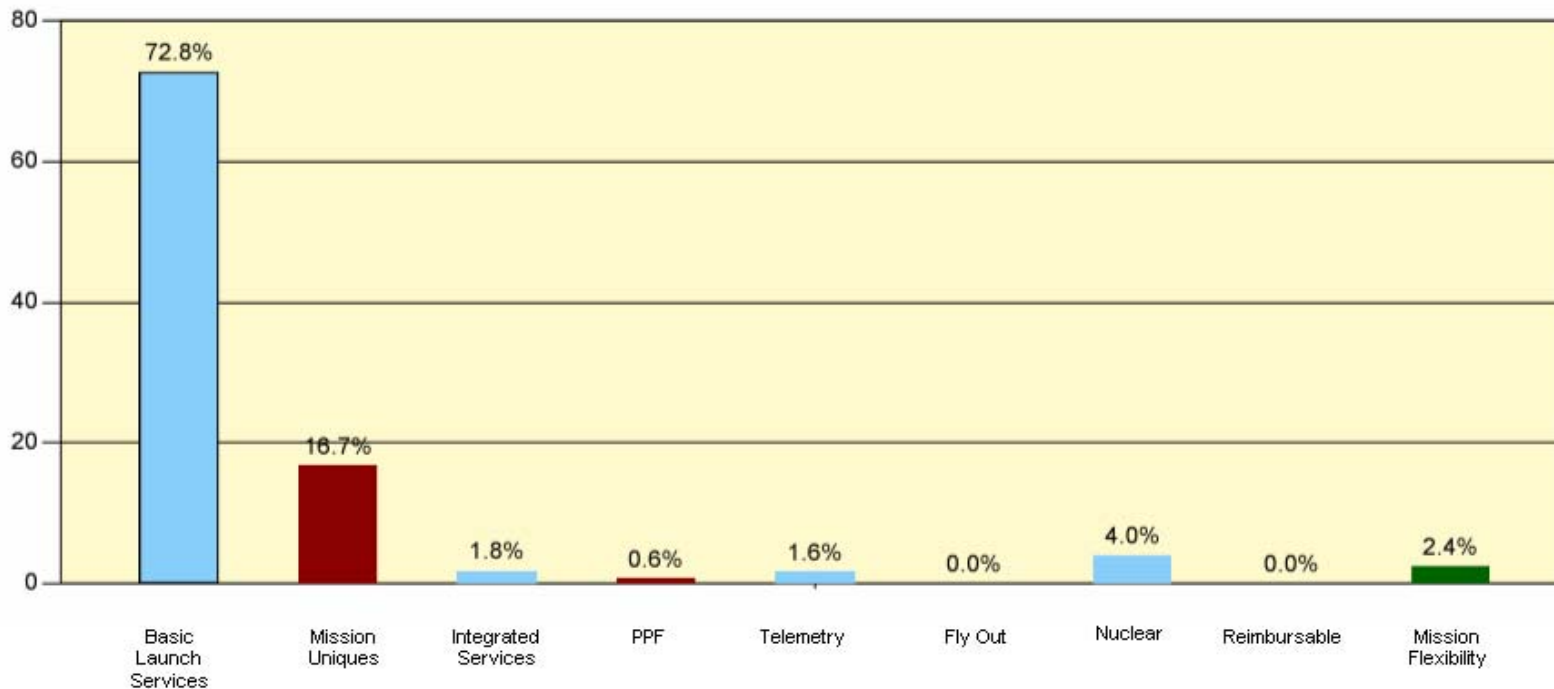
Launch Services Budget Breakdown

MSL Mission

Harold Coleman

LAUNCH SERVICES PROGRAM

% of Total Launch Service Cost - 7 / 2008



Notes:

Variance: Budget requirements have been refined, and upward/downward adjustments to several Mission Uniques liens resulted in slight decrease in Mission Flexibility, from 2.5% to 2.4%.

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MSL - Business

Harold Coleman

LAUNCH SERVICES PROGRAM

Budget

Contracts

May	Jun	Jul
G	G	G
G	G	G

Milestone	Date
Milestone 1	06/30/06
Milestone 2	09/20/06
Milestone 3	04/02/07
Milestone 4	07/24/2007
Milestone 5	10/11/2007
Milestone 6	01/16/08
Milestone 7	02/19/08
Milestone 8	10/01/2008
Milestone 9	11/15/2008
Milestone 10	02/15/09
Milestone 11	05/01/09
Milestone 12	09/15/09

<input type="checkbox"/>	Open Milestone Payment
<input type="checkbox"/>	Paid Milestone

Contract Status		
Launch Services		
Contract Mod	Number	Description
	NLSL-083	ATP Mission
	NLSL-091	S/C Mass & Backup Launch opportunity revisions, ATP of Mission Unique Services: 3- Interleaved Telemetry, 11- Mission Unique Flight Design and Analyses, 12 - External Access Platforms, 13 - VIF Level 5 Structural Support & Platform configuration, 14 - CI
	NLSL-094	ATP of Mission Unique Services 8.0 - Diode Assemblies & 9.0 - Enhanced PLA Cleaning & UV Inspection
	NLSL-098	3% Volume Buy Discount Application
	NLSL-120	Payment schedule and adjust the milestone completion criteria for the MSL Mission CLIN 7.

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There are no LD Contract Mods				
Task Assignments	Number	Description	Completion Date	Invoice Paid Date
	NLSB-199	Pre-ATP Trajectory	Cancelled	
	NLSL-053	Pre-ATP Trajectory	4/1/06	4/24/06
	NLSL-054	AV NEPA & Launch Approval SAR Databook support	12/22/2006	1/18/07
	NLSL-060	MUS 11 Pre-Authorization	12/31/2006	2/12/07
	NLSL-073	Separation Pointing Accuracy Evaluation	5/30/07	6/28/07
	NLSL-074	PDLC Interface Data Output Requests	4/30/07	05/16/2007
	NLSL-079	Early Integrated Thermal Analysis	10/31/2007	11/26/2007
	NLSL-080	28 Volt Power	07/30/2008	
	NLSL-081	Final Design Load Cycle (FDLC) Interface Data Output Requests	11/30/2007	12/03/2007
	NLSL-083	PECS As Backup to VIF ECS Feasibility Assessment	12/15/2007	02/15/2008
	NLSL-086	LC41 Environmental Control System (ECS) GN2 System Redundancy Addition Feasibility Assessment	02/15/2008	03/17/2008
	NLSL-090	5M PLF Planetary Protection Materials and Processing Assessment for the MSL Mission	05/30/2008	06/23/2008
	NLSL-091	GN2 Instrument Purge and Battery Cooling Service Study for the MSL Mission.	05/31/2008	
	NLSL-092	Additional Lightning Suppression Assembly (LSA) and LSA Jumpers	09/30/2008	
	NLSL-093	5m PLF Fairing Acoustic Protection (FAP) Vibration Test Bioassay Sampling Proposal Preparation	02/21/2008	03/06/2008
	NLSL-097	Modifications to +X Payload Fairing Door Mock-Up.	05/30/2008	06/11/2008
There are no PPF Contract Mods				
There are no Other Contract Mods				
	Issues			
0	This mission is designated as planetary and is subject to equitable adjustment, therefore grace days do not apply.			

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Center

MSL - Safety and Mission Assurance

Laura McDaniel

LAUNCH SERVICES PROGRAM

Assurance Verification Areas	Status		Evidence of Completion			
	Complete	In Work		May	Jun	Jul
Quality				G	G	G
Software / Hardware Problems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues	G	G	G
Alerts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues	G	G	G
Audits/Inspections/Surveillances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues or concerns	G	G	G
Limited Life Items	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues	G	G	G
Reliability				G	G	G
FMEA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues.	G	G	G
Reliability Assessments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues.	G	G	G
Safety				G	G	G
Requirements Definitions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Tailoring in work.	G	G	G
Range Safety & Mission Flight Rules	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues.	G	G	G
Licenses/Use Authorizations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues.	G	G	G
Safety Documentation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues at this time.	G	G	G
Non-compliances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues at this time.	G	G	G
Contingency Planning	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues.	G	G	G
Mission Assurance				Y	G	G
Lessons Learned	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues.	G	G	G
First Flight/Mission Unique items	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Multiple mission unique items needing review.	G	G	G
Test/Qualification/Certification	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues	G	G	G
Mission Assurance Assessments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	FIW/OIV issue.	Y	G	G
Risk Management	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues.	G	G	G

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MSL Comm & Telemetry

Marty Loughheed and Rolando Nieves

LAUNCH SERVICES PROGRAM

Communications

Voice Comm
Data Comm
Networks
Video Comm
Timing
RF Comm
LSSP Comm Annex

May	Jun	Jul
G	G	G
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

Telemetry

Decommuration Tables
Data Integrity Test
Software Lockdown
Software Inventory
Console Configuration
Console Checkout

May	Jun	Jul
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

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MSL Nuclear

John Giles

LAUNCH SERVICES PROGRAM

	May	Jun	Jul
Launch Approval	G	G	G
LV Data Books	G	G	G
Security	G	G	G
Radiation Safety	G	G	G
Facility	G	G	G

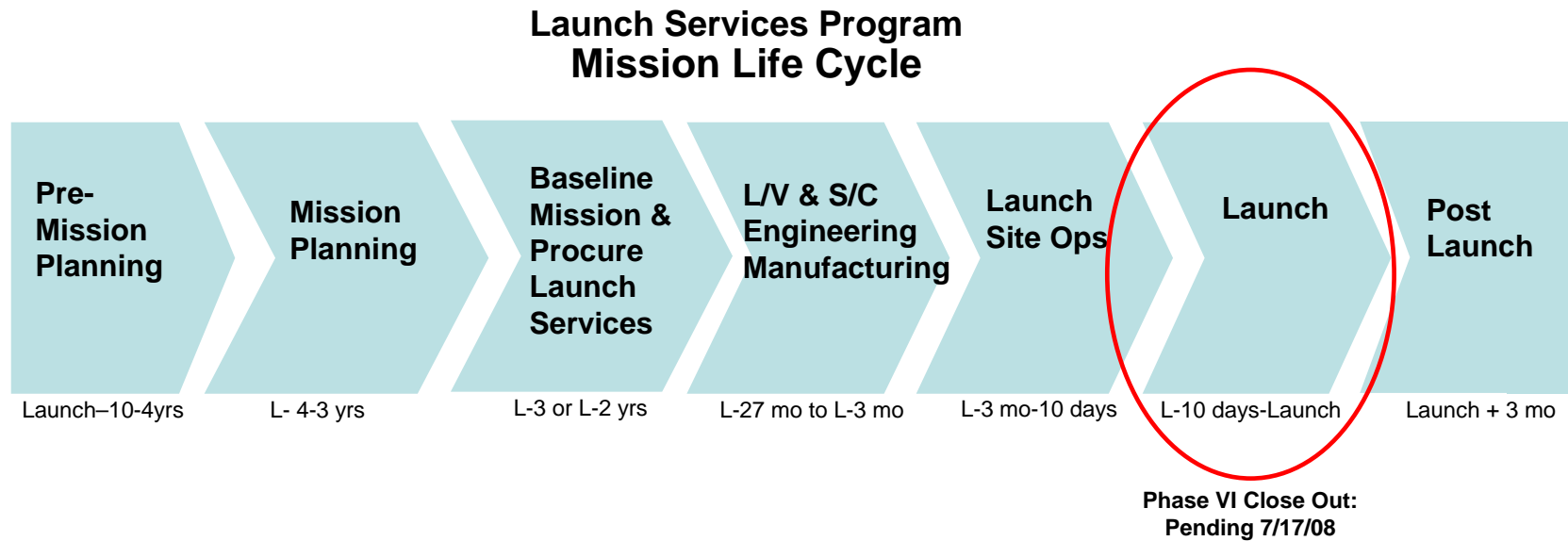
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BOSS Mission Status: OSTM

Launch Date: 6/20/08





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OSTM Project Summary

LAUNCH SERVICES PROGRAM

Mission	OSTM
Launch Date	2008/06/20
Launch Vehicle	Delta II
Launch Period Window	
PPF	Commercial PPF

	May	Jun	Jul
OVERALL MISSION	R	G	0

MISSION MANAGEMENT

	May	Jun	Jul
Observatory Status	G	G	0
Manifest/Range	G	G	0
Integrated Schedule	G	G	0
ICD	G	G	0
CDRLs (S/C & LSC)	G	G	0

LAUNCH SITE

	May	Jun	Jul
LSSP	G	G	G
Customer Inputs	G	G	G
PPF	G	G	G
Launch Site Unique	G	G	G
Spacecraft OPS	G	G	G

SAFETY & MISSION ASSURANCE

	May	Jun	Jul
Mission Assurance	Y	G	0
Safety	G	G	0
Quality	Y	G	0
Reliability	G	G	0

ENGINEERING

Launch Vehicle	R	G	0
Mission Specific	G	G	0
Certification	N/A	0	0
Mission Analysis	G	G	0
ERS/ERB	G	G	0
Launch PAD/GSE	G	G	0
Mission Unique IV&V	N/A	0	0

COMM & TELEMETRY

Communications	G	G	0
Telemetry	0	0	0

BUSINESS

Budget	G	G	G
Contracts	G	G	G

LEGEND

Proceeding on Plan
 Area of Concern
 Significant Problem
 Not Evaluated
 Not Applicable

G
Y
R
0
N/A

DOWNRANGE TELEMETRY

Ground Stations	G	G	0
Deployables	N/A	N/A	0
P-3/OTTR	G	G	0

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OSTM - Open/Accepted Risks

LAUNCH SERVICES PROGRAM

		Condition
RYG Trend	RiskID	Consequence
0	P0019	USAF must fly out 4 Delta II GPS by the end of FY 2008 to avoid USAF Program impacts.
		NASA FPB Manifest dates may be required to move to provide GPS priority.
0	P0018	Traditional DMCO testing on DI vehicles will be eliminated
		Elimination of DMCO testing will not allow for capturing hardware failures off-pad, and thus introduce potential for on pad schedule delays
0	V0057	During Accelerated Age Testing on 09/28/07, a Gas Generator Thin Layer Explosive end tip failed to produce an output.
		Failure of the GG-TLX to produce an output will cause all ground ignited GEMs to remain attached to the launch vehicle resulting in mission failure.

P
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C
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C
U
R
R
E
N
C
E

5
91-
100%
4
51-90%
3
11-50%
2
6-
10%
1
1-5%



1 2 3 4 5
IMPACT

July 17, 2008

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OSTM - Actions / Issues / Concerns

LAUNCH SERVICES PROGRAM

There are no Actions.

Mission Summary Map	G/Y/R	ISSUES / CONCERNS	WI/ERS/Risk/Problem	Open Date	Due Date
Engineering	0	OSTM mission requires the use of the Ordnance Arming Device (OAD). The GG TLX assembly that actuates the OAD has had a test failure. NASA LSP ERB recommended not to use the current GG TLX lot on any NASA Mission. ULA is requesting a Range waiver to allow use of the Detonator Block assembly.	WI		04/25/2008
Engineering	0	Acceptability of GG TLX line on OAD system.			

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OSTM - Significant Events

LAUNCH SERVICES PROGRAM

Accomplished	
CCR written to change the configuration of the launch vehicle from a 7320-9.5 to a 7320-10.	
Range Concept Briefing	05/18/05
CLA data delivered to S/C	
S/C PDR	Nov-2005
Boeing performed the Quick CLA to determine loads on S/C with 10 Ft fairing.	
Preliminary Isolation system design	
Kick off MIWG	06/29/06
ATP	Mar-2006
Study(TA) on load alleviation systems	
RFP to take Isolation system to PDR	
Satellite CDR	10/24/06-10/24/2006
MIWG/GOWG at JPL	11/16/2006-Nov. 2006
SoftRide Isolation System PDR	02/8/2007-2/8/2007
Meeting with CEO office to present Softride System for OSTM	11/21/2006-11/21/2006
MIWG/GOWG	02/21/2007-02/22/2007
Isolation System Phase II Turn on	3/23/07-4/3/07
OSTM Spacecraft Load Isolation System PDR & ERB	02/08/2007-02/08/2007
ICD ERB	4/8/07-4/8/07
ICD ERB Peer Review with Integration Group completed.	04/04/2007-04/04/2007
Softride system - Component Level CDR (KSC ERB held in conjunction with the CDR / ERS-07-142)	5/15/07-05/15/2007

Planned	
OSTM Weighing	05/26/2008-05/28/2008
OSTM Mate to PAF/Load Isolation System	05/28/2008-05/29/2008
OSTM spacecraft transport to SLC-2W	06/02/2008-06/03/2008
OSTM Spacecraft fueling at PPF	05/12/2008-05/17/2008

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Softride Component Level CDR - Action Items Responses (ERB Reconvene) prior to start of QQual Test Program.	06/05/2007-06/05/2007
OSTM 3715 PAF HAR at Astrium, England	07/11/2007-07/13/2007
OSTM MIWG & GOWG @ Alcatel, France	08/30/2007-09/02/2007
OSTM Separation shock Tests at Alcatel, France	08/27/2007-08/29/2007
Softride System- Isolators Qualification Testing at CSA	06/26/2007-07/21/2007
Softride - System Level CDR @ HB (LSP ERB in conjunction) - ERB completed partialy. A recontinue is scheduled for August 21.	08/09/2007-08/21/2007
OSTM Vibration Testing at Alcatel, France . Accomplished successfully	08/28/2007-08/13/2007
ICD Signed off.	06/14/2007-9/02/07
Payload to Blockhouse Wiring Diagram reviewed by LSP team and comments provided to ULA. Updated version in work	06/08/2007-06/18/2007
RF Hazard Analysis Review complete. Errors found in the analysis due to conservative assumptions. ULA is updating the analysis.	06/05/2007-06/18/2007
Preliminary Mission Analysis Input reviewed and submitted to ULA.	04/10/2007-04/16/2007
Preliminary Mission Analysis results expected July 13.	07/13/2007-9/02/07
Payload Separation Analysis- Initial Memo expected June 15.	06/15/2007-07/21/2007
OSTM Fit Check at Alcatel, France	10/08/2007-10/12/2007
OSTM Softride Isolator Hardware Acceptance Review at CSA Engineering	09/26/2007-10/02/2007
Spacecraft Mass Simulator Tap Test and Model Correlation	11/01/2007-11/20/2007
OSTM Softride Isolation System Dynamic Testing At Huntington Beach	11/05/2007-12/21/2007
OSTM Softride Isolation System Shock Attenuation Testing at HB	12/03/2007-12/21/2007

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OSTM GOWG at VAFB	12/11/2007-12/13/2007
OSTM MIWG AT VAFB	12/13/2007-12/13/2007
S/C Thermal Model Developed by JPL and Converted to Required Format BY NASA LSP	11/20/2007-12/04/2007
S/C Thermal Model Delevered to ULA	12/05/2007-12/05/2007
OSTM Spacecraft Qualification Review at Thales Alenia, Cannes FR	03/10/2008-03/15/2008
OSTM Isolation System integration to flight payload attach fitting (PAF)	01/24/2008-01/30/2008
OSTM Isolation System and PAF shippment from HB to VAFB	02/22/2008-02/28/2008
OSTM Spacecraft Ship from Thales Alenia, Cannes FR to VAFB	04/17/2008-04/29/2008
OSTM MIWG Meeting at KSC	02/28/2008-02/28/2008
OSTM Load Isolation System - Design Certification Review (DCR) at ULA, Denver	03/28/2008-04/11/2008
OSTM PAF/Load Isolation System fitcheck with DMA	03/03/2008-03/07/2008
ULA Mission Analysis Review (Denver)	04/03/2008-04/04/2008
Ground Operation Review (VAFB)	03/26/2008-03/27/2008
OSTM Pre-Vehicle on Stand Review	04/15/2008-04/16/2008
NASA's Launch Vehicle Readiness Review	05/05/2008-05/05/2008

BOSS OSTM Schedule

LSP-F-330.02 Basic

Page 1 of 1

7/10/08

WBS	Name	Resp.	May'08		Jun'08				Jul'08			
			19	26	2	9	16	23	30	7	14	21
	Launch Phase (~L-10 days to Launch)											
	START PHASE		6/5 ▲									
6.3.1	Mate SC to LV	SC/LV	5/28 ▲									
6.3.2	"Process LV, SC, and Integrated LV/SC"	SC/LV	6/20									
6.3.3	Review Press Release	LD	6/18 ▲									
6.3.4	Public Awareness	HQ	6/19 ▲									
6.3.5	"LV & MU Eng Review Process (ERBs,ERSs,Req Rev, Des Rev, Qual)"	TM	6/19 ▲									
6.3.6	FRR	LD	6/16 ▲									
6.3.7	LMCM	LD	6/17 ▲									
6.3.8	Mission Rehearsal (MDR)	LD	6/17 ▲									
6.3.9	ICD Verification Complete	TM	6/19 ▲									
6.3.10	LRR	LD	6/18 ▲									
6.3.11	Sign CoFR	LD	6/18 ▲									
6.3.12	Launch Decision	LD	6/20 ▲									
6.3.13	Launch	LV	6/20 ▲									
6.3.14	Confirm SC Separation	LV	6/20 ▲									
6.3.15	Launch Vehicle in Final State	LV	6/20 ▲									
6.3.16	Phase Close-Out	MM	7/17 △									

TM = Technical Management

LSIM = Launch Site Integration Manager

PIM = Program Integration Manager

HQ = NASA HQ & Mission Directorate

LSTO = LSTO (Mini Source Board)

SC = Spacecraft Project

LD = Launch Director

LV = Launch Vehicle Contractor

SMA = Safety & Mission Assurance

LSP = LSP Mgmt

MM = Mission Manager



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OSTM Mission Management

Armando Piloto

LAUNCH SERVICES PROGRAM

Mission

Launch Date

Orbit Requirement

Launch Vehicle Class

Launch Period Window

PPF

Mass (kg)

PAD



ICD

OSTM
2008/06/20
1336 km polar, 66 degree incl.
Delta II
Commercial PPF
505.3 kg.
SLC-2

Observatory Status

Observatory Status

Schedule

Budget

Deliverables

Testing

ATLO

Instrument

May	Jun	Jul
G	G	0
G	G	0
G	G	G
G	G	0
G	G	0
G	G	0
G	G	0

Launch Vehicle Status

Integrated Schedule

CDRLs (S/C & LSC)

Manifest/Range

Ground Stations

Deployables

P-3/OTTR

May	Jun	Jul
G	G	0
G	G	0
G	G	0
G	G	0
N/A	N/A	0
G	G	0

Mission Center:

Program:

PM

LVI

MM

IE

LSIM

PIM

MAM

MCE

MTE

JPL
Parag Vase
Mike Gallagher
Armando Piloto
Thomas Frattin
Julie Schneringer
Walner Thervil
Craig Schreiber
Robert McEntire
Alex Biamonte

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SIGNED SCNS:		SCNS IN REVIEW	
SCN #	DATE SIGNED	SCN #	DATE SIGNED
001	03/06/2008	018	
002	04/14/2008		
003	04/14/2008		
005	03/06/2008		
006	05/02/2008		
007	03/06/2008		
008	03/06/2008		
009	04/22/2008		
010	03/06/2008		
011	04/15/2008		
012	05/12/2008		
013	04/22/2008		
014	05/12/2008		
015	04/15/2008		
016	05/12/2008		
017	05/12/2008		

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OSTM - Engineering

Thomas Frattin

LAUNCH SERVICES PROGRAM

	May	Jun	Jul
Launch Vehicle	R	G	0
Payload Fairing	G	G	0
First Stage	R	G	0
Second Stage	G	G	0
Third Stage	N/A	0	0
Payload Attach Fitting	G	G	0
Other	N/A	0	0
Mission Specific	G	G	0
Certification	N/A	0	0
Mission Analysis	G	G	0
ERS/ERB	G	G	0
Launch PAD/GSE	G	G	0
Mission Unique IV&V	N/A	0	0

REQUIREMENT VERIFICATION STATUS

NUMBER OF REQUIREMENTS	70
VERIFIED TO DATE	14

LAUNCH PAD / GSE MODS (IF APPLICABLE)

There are none.

MISSION UNIQUE STUDIES (IF APPLICABLE)

Spacecraft Thermal Analysis
Payload Fairing Venting Analysis

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OSTM - Mission ERB Status

Thomas Frattin

LAUNCH SERVICES PROGRAM

R/Y/G	ERS #	TITLE	ERB Req?		Board Held?			Closure		
			Y	N	Y	N	N/A	AI	ENG.	OCE
0	ERB-06-330	OSTM Soft Ride System- System Level PDR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0	ERB-07-142	OSTM Softride System- Component Level CDR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0	ERB-07-73	OSTM ICD ERB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0	ERB-07-181	OSTM Load Isolation System-CDR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0	ERS-08-030	OSTM Load Isolation System - Design Certification Review (DCR)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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OSTM - Vehicle ERB Status

Thomas Frattin

LAUNCH SERVICES PROGRAM

R/Y/G	ERS #	TITLE	ERB Req?		Board Held?			Closure		
			Y	N	Y	N	N/A	AI	ENG.	OCE
0	06-284	Delta II Alenia Tank FM-21(OSTM) Circumferential/Boss Weld Defects	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
0	07-308	Delta II GG TLX Output Failure (OAD)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0	07-02	Delta II 2nd Stage Propellant Tank Design and Process Revisions (Clickbonds)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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OSTM - Launch Site

Julie Schneringer

LAUNCH SERVICES PROGRAM

	May	Jun	Jul
LSSP	G	G	G

LSSP	Planned	Released
Preliminary	03/15/2007	05/18/2007
Baseline	12/12/2007	12/12/2007

	May	Jun	Jul
CUSTOMER INPUTS	G	G	G

DELIVERABLES	May	Jun	Jul
Security and Badging	G	G	G
Training and Personnel Cert	G	G	G
Contingency Plans	G	G	G
Safety LSIM	G	G	G
Radiation Control	G	G	G
Operational Plans	G	G	G

UNIQUE REQUIREMENTS

	May	Jun	Jul
LAUNCH SITE UNIQUE	G	G	G
Foreign National Escorts	G	G	G
European Power Supplies/UPS	G	G	G
PPF	G	G	G
Commerical PPF	G	G	G
PPF TAA	G	G	G
Spacecraft OPS	G	G	G
Fueling	G	G	G

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OSTM Budget Breakdown

Walner Thervil

LAUNCH SERVICES PROGRAM

The launch service budget includes:

* **Launch Services**

- Standard launch Vehicle Services provided by this contract. This line item is firm fixed price and has no flexibility.

* **Mission Uniques**

- Requirements necessary to customize basic vehicle hardware to meet unique s/c driven requirements.
- Other services directly attributable to the mission.
- Contains some flexibility except when technical risk is affected. Spacecraft requirements are the cost driver.

* **Integrated Services**

- LSP contractor support service (ELVIS, CAPPs, JBOSC, KICs, etc).
- USAF range costs attributable to the mission
- Limited flexibility

* **Payload Processing Facility**

- Government facility: spacecraft customers are required to be processed in a government facility if the mission is planetary or has nuclear requirements
- Commercial facility: all other missions have been directed to process in a commercial facility.
- Contains some budget flexibility. Additional spacecraft cleanliness requirements or hazardous requirements may increase PPF costs.

* **Telemetry**

- Assets required to meet minimum launch vehicle telemetry requirements.
- Includes fixed and deployable ground stations, instrumented aircraft, and ocean assets.
- Limited flexibility requirements are often set late in the integration cycle.

* **Fly Out**

- Costs that each mission in the 19-Pack must incur.
- Long lead material procurement to mitigate risks due to gaps in production and supplier orders.
- Post-production support for labor skill retention, procure, manufacture, store and maintain under configuration control, mission critical spare parts.
- Pad Sustainability costs for SLC-2 and SLC-17.
- No flexibility-contract costs

* **Nuclear**

- RTG/RHU processing
- RTG/RHU databooks and approval
- Limited flexibility

* **Reimbursable**

- Reimbursable FC for transportation, labor, and CMO.

* **Mission Flexibility**

- Portion of the mission budget available for funding additional task assignments, non-standard services or meeting unexpected requirements.

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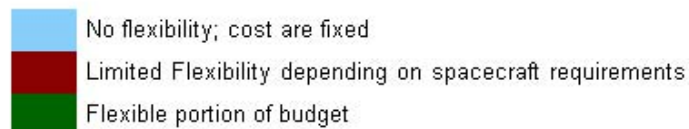
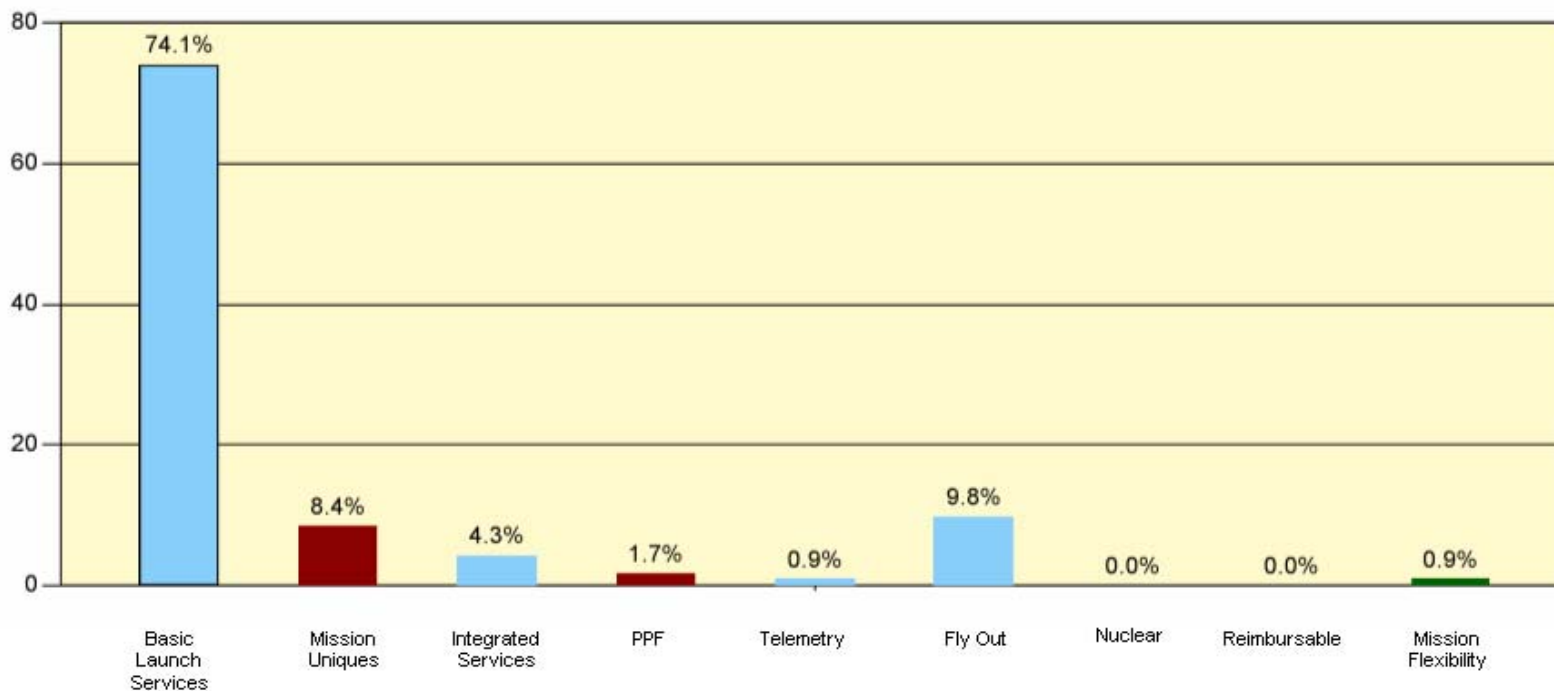
Launch Services Budget Breakdown

OSTM Mission

Walner Thervil

LAUNCH SERVICES PROGRAM

% of Total Launch Service Cost - 7 / 2008



Notes:

Variance: Mission Flexibility reduced by 1.1% from last quarter due to the additional Task Assignments that were required to mitigate the Ordnance Arming Device (OAD) technical issue. Overall mission budget was also reduced by 0.94%. Mission flexibility was 2.0% in April 2008.

Note: Above percentages contain dollars associated with the Boeing settlement. Boeing settlement for this mission is \$367K.

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OSTM - Business

Walner Thervil

LAUNCH SERVICES PROGRAM

Budget

Contracts

May Jun Jul

G	G	G
G	G	G

Milestone	Date
Milestone #1	3/15/2006
Milestone #2	6/15/2006
Milestone #3	10/30/2006
Milestone #4	2/6/2007
Milestone #5	4/4/2007
Milestone #6	10/03/2007
Milestone #7	9/15/2007
Milestone #8	12/15/2007
Milestone #9	3/15/2008
Milestone #10	6/20/2008

<input type="checkbox"/>	Open Milestone Payment
<input type="checkbox"/>	Paid Milestone

Contract Status		
Launch Services		
Contract Mod	Number	Description
	163	NSS 2.1.2 - 9.5ft to 10ft PLF
	175	NSS 20.3.3 Quick Turnaround Coupled Loads
	212	Flyout costs + Mission ATP
	125	Flyout costs
	240	NSS 32.1 FY06 VAFB Launch Site Maintenance
	057	NSS 30.1 Long-lead Mat'l/Adv for NSS 33.2 Mission critical FY03
	050	Original 19-Pack Launch Date 12/31/2006
	307	NSS 10.1 Onboard Camera
	318	NSS 36.1 Telemetry Acquisition Assistance Message and Vehicle Acquisition Message

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Contract Mod	Number	Description		
	287	NSS 35.2 Additional 40 Mission Console Notebooks for VAFB Launches		
	342	Mission Interface Control Document (ICD)		
Contract Mod (LD)	Number	Description		
	136	Launch Date Changed from December 31, 2006 to October 1, 2007 (pre-ATP)		
	159	Launch Date Changed from October 1, 2007 to April 1, 2008 (pre-ATP)		
	212	Launch Date Changed from April 1, 2008 to June 15, 2008 (pre-ATP)		
	343	Launch Date Changed from June 15, 2008 to June 20, 2008 (due to weather)		
Task Assignments	Number	Description	Completion Date	Invoice Paid Date
	NLSB-155	OSTM Environments Effort	04/25/2005	09/30/2005
	NLSB-165	Parametric Study for Loads	08/30/2005	07/27/2005
	NLSB-165R1	Parametric Study for Loads	11/10/2005	11/02/2005
	NLSB-177R1	Passive Isolation Sys	01/17/2006	03/15/2006
	NLSB-177R2	Passive Isolation Sys	02/17/2006	03/27/2006
	NLSB-195R2	CLA for Passive Isolation Sys	06/16/2006	07/17/2006
	NLSB-225	MECO Loads Analysis	07/24/2006	09/15/2006
	NLSB-229	Spacer for Isolation System	08/31/2006	09/20/2006
	NLSB-235	Inert DPAF Proposal Prep	04/14/2006	09/11/2006
	NLSB-242	PAF Pre-production review	11/29/2006	11/20/2006
	NLSB-248	Passive Isolation System to PDR (Phase 1)	04/09/2007	06/21/2007
	NLSB-266	Isolation System Engineering Development Unit (EDU) Fabrication	03/28/2007	06/21/2007
	NLSB-272R1	Payload Isolation System Implementation	07/15/2008	
	NLSB-293	OSTM Ground Support Equipment Task Plan Proposal Cost.	06/15/2007	08/13/2007
	NLSB-298	OSTM Payload Attach Fitting and Clampband inspection	08/08/2007	01/07/2008
	NLSB-313	Flight Camera Relocation	07/20/2008	07/02/2008
	NLSB-328	Telemetry Tracking Service Hartebeesthoek (HBK)	8/20/2008	
	NLSB-329	Telemetry Tracking Service from Cabo San Lucas	8/20/2008	
	NLSB-331	E-packages Enhanced Data Review	05/29/2008	06/13/2008

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Task Assignments	Number	Description	Completion Date	Invoice Paid Date
	NLSB-333	Off-Nominal Flight Analysis due to OAD System Failure	06/01/2008	
	NLSB-336	Detonator Block Panel Assembly Installation	6/15/2008	
Contract Mod (PPF)	Number	Description		
	WCCPP-001	Commercial PPF (TO# NNK07LAB7D)		
There are no Other Contract Mods				
There are no Issues.				



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OSTM - Safety and Mission Assurance

Craig Schreiber

LAUNCH SERVICES PROGRAM

Assurance Verification Areas	Status		Evidence of Completion			
	Complete	In Work		May	Jun	Jul
Quality				Y	G	0
Software / Hardware Problems	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No issues.	Y	G	0
Alerts	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No issues.	G	G	0
Audits/Inspections/Surveillances	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No issues.	G	G	0
Limited Life Items	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No issues.	G	G	0
Reliability				G	G	0
FMEA/Fishbones/Equivalent	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No issues.	G	G	0
Reliability Assessments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No issues.	G	G	0
Safety				G	G	0
Requirements Definitions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No issues.	G	G	0
Range Safety & Mission Flight Rules	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No issues.	G	G	0
Licenses/Use Authorizations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No issues.	G	G	0
Safety Documentation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No issues.	G	G	0
Non-compliances	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No issues.	G	G	0
Contingency Planning	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No issues.	G	G	0
Mission Assurance				Y	G	0
Lessons Learned	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No issues.	G	G	0
First Flight/Mission Unique items	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No issues.	G	G	0
Test/Qualification/Certification	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No issues.	G	G	0
Mission Assurance Assessments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No issues.	Y	G	0
Risk Management	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No issues.	G	G	0

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OSTM Comm & Telemetry

Robert McEntire and Alex Biamonte

LAUNCH SERVICES PROGRAM

Communications

Voice Comm
Data Comm
Networks
Video Comm
Timing
RF Comm
LSSP Comm Annex

May	Jun	Jul
G	G	0
G	G	0
G	G	0
G	G	0
G	G	0
G	G	0
G	G	0

Telemetry

Decommuration Tables
Data Integrity Test
Software Lockdown
Software Inventory
Console Configuration
Console Checkout

May	Jun	Jul
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

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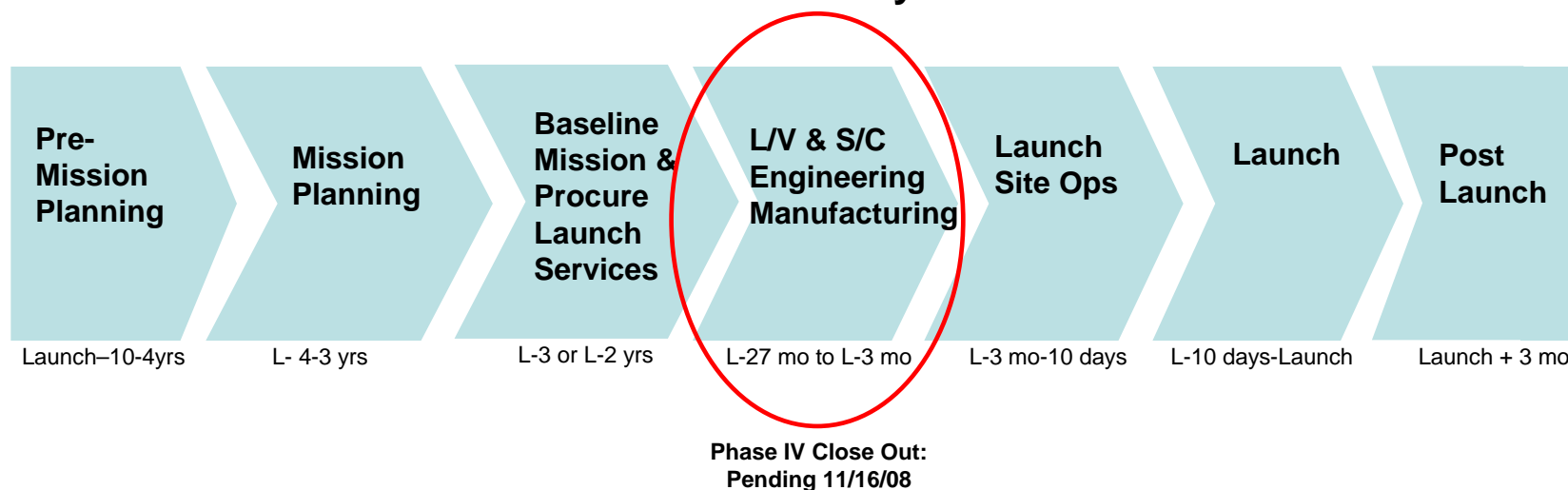
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BOSS Mission Status: Kepler

Launch Date: 2/16/09

Launch Services Program Mission Life Cycle





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Kepler Project Summary

LAUNCH SERVICES PROGRAM

Mission	Kepler
Launch Date	2009/02/16
Launch Vehicle	Delta II
Launch Period Window	
PPF	Commercial PPF

OVERALL MISSION

May	Jun	Jul
G	Y	Y

MISSION MANAGEMENT

Observatory Status
Manifest/Range
Integrated Schedule
ICD
CDRLs (S/C & LSC)

May	Jun	Jul
G	G	G
G	Y	Y
G	G	G
G	G	G
G	G	G

LAUNCH SITE

LSSP
Customer Inputs
PPF
Launch Site Unique
Spacecraft OPS

May	Jun	Jul
G	G	G
G	G	G
G	G	G
G	G	G
0	0	0

SAFETY & MISSION ASSURANCE

Mission Assurance
Safety
Quality
Reliability

May	Jun	Jul
Y	Y	Y
G	G	G
Y	Y	Y
G	G	G

ENGINEERING

Launch Vehicle
Mission Specific
Certification
Mission Analysis
ERS/ERB
Launch PAD/GSE
Mission Unique IV&V

0	G	G
0	G	G
0	N/A	N/A
0	G	G
0	G	G
0	G	G
0	N/A	0

COMM & TELEMETRY

Communications
Telemetry

G	G	G
0	0	0

BUSINESS

Budget
Contracts

G	G	G
G	G	G

LEGEND

Proceeding on Plan
Area of Concern
Significant Problem
Not Evaluated
Not Applicable

G
Y
R
0
N/A

DOWNRANGE TELEMETRY

Ground Stations
Deployables
P-3/OTTR

0	0	0
0	0	0
0	0	0

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Kepler - Open/Accepted Risks

LAUNCH SERVICES PROGRAM

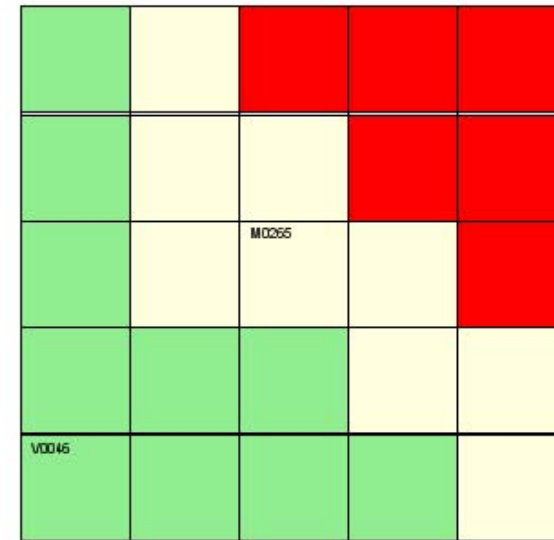
		Condition
RYG	RiskID	Consequence
O	V0046	ULA/Boeing does not perform an inspection for microscopic cracks (micro cracks) before providing a spacecraft customer with a Test Payload Attach Fitting (TPAF) or clampband.
		Propagation of a micro crack(s) in the TPAF or clampband during shock or vibration testing could cause damage to the spacecraft.
O	M0265	A signed MOA and Host Tenant Agreement (HTA) for transition of SLC-17 Delta-II assets from Air Force to NASA does not currently exist.
		Without signed MOA and HTA, there will no way to quantify cost of O&M for the Kepler Mission.

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5
91-100%
4
51-90%
3
11-50%
2
6-10%
1
1-5%



1 2 3 4 5

IMPACT

July 17, 2008

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Kepler - Actions / Issues / Concerns

LAUNCH SERVICES PROGRAM

There are no Actions.

Mission Summary Map	G/Y/R	ISSUES / CONCERNS	WI/ERS/Risk/ Problem	Open Date	Due Date
Mission Management	Y	Third Stage Ordnance timer issue forcing changes in manifest and Launch Readiness Dates	WI	07/08/2008	10/01/2008

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Kepler - Significant Events

LAUNCH SERVICES PROGRAM

Accomplished	
TPAF use TA on contract near term	
Received and negotiated TPAF build proposal	
Revised FY06 funding profile to assist project with 2nd Qt shortfall	
Kepler Delta CDR	10/16/06-10/20/06
TA in work to determine Boeing approval of S/C use of "to be negotiated" area below sep plane. Received preliminary approval from Boeing in Aug.	08/01/2006
Boeing support/training for TPAF at Ball facility	10/02/2006-10/11/2006
Provide some of the flight connectors to support Kepler Cable build schedule.	12/15/2006-12/15/2006
Received Kepler FEM to support third CLA analysis and forwarded to Boeing (Contract Mod still in work)	09/11/2006-09/13/2006
S/C to deliver thermal model for ITA, canceled activity	12/22/2006-03/09/2007
MIWG planned for Nov 16	11/16/2006-11/16/2006
GOWG on Jan 19 at Astrotech, Titusville	01/18/2007
Delivered updated Kepler IRD	02/05/2007-02/07/2007
planning kick-off MIWG, April 5 in HB	02/08/2007-04/5/2007
ULA to deliver final set of GSE connectors to S/C	02/01/2007-02/23/2007
Draft ICD released for review	03/31/2007-4/31/2007
S/C delivered IGES files as input to Mission Compatibility. Delivered to LSC	02/14/2007-03/02/2007
MIWG/GOWG at KSC on 23-24 October	08/14/2007-10/25/2007
PMA input	11/26/2007-02/26/2008

There are no items planned

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MIWG planned for 19 March 2008	03/19/2008
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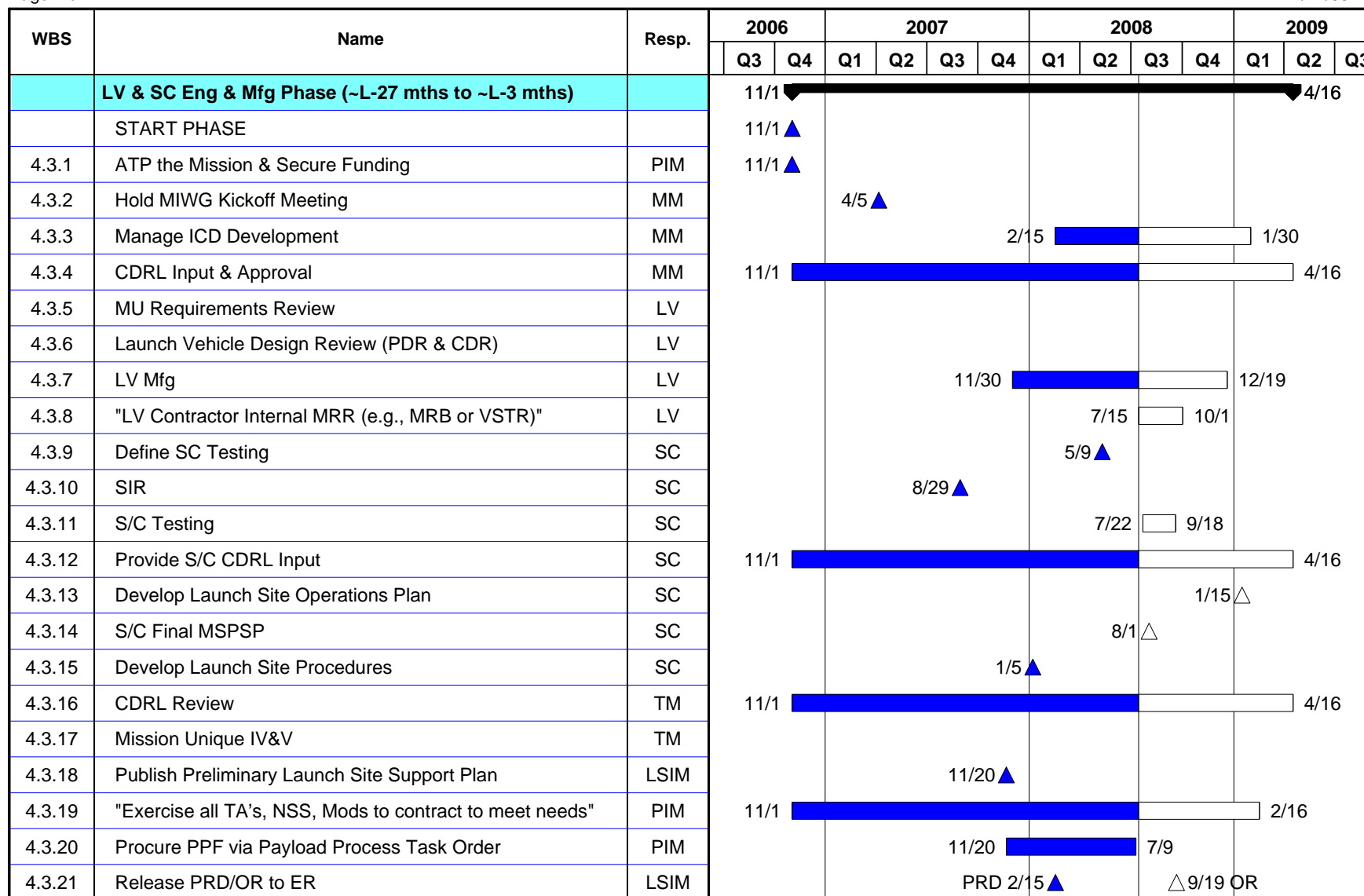
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BOSS Kepler Schedule

LSP-F-330.02 Basic

Page 1 of 2

7/14/08



TM = Technical Management

LSIM = Launch Site Integration Manager

PIM = Program Integration Manager

HQ = NASA HQ & Mission Directorate

LSTO = LSTO (Mini Source Board)

SC = Spacecraft Project

LD = Launch Director

LV = Launch Vehicle Contractor

SMA = Safety & Mission Assurance

LSP = LSP Mgmt

MM = Mission Manager

BOSS Kepler Schedule

LSP-F-330.02 Basic

Page 2 of 2

7/14/08

WBS	Name	Resp.	2006		2007				2008				2009		
			Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
4.3.22	Review LV Mission Unique MSPSP	SMA									12/16		1/16		
4.3.23	Mission Support Analysis	TM													
4.3.24	Verify ICD	TM						2/15						2/16	
4.3.25	HAR/MSR equivalent	LV							5/1						
4.3.26	Develop LV/SC & Integrated LS Procedures	LV						1/5							
4.3.27	LV Components arrives at Launch Site	LV										11/19			
4.3.28	Publish Baseline LSSP	LSIM									9/9				
4.3.29	GOWG	LSIM		1/18					6/11			8/21			
4.3.30	Prepare PPF & services for GSE/SC arrival	LSIM									10/6		12/8		
4.3.31	Comm & Telemetry Reviews	LSIM						2/1				8/21			
4.3.32	Review S/C Final MSPSP	SMA									10/15		11/15		
4.3.33	GOR	LSIM									11/12				
4.3.34	Process Launch Delays as needed	PIM	11/1											2/16	
4.3.35	Track Milestone Payments	PIM	11/1											2/16	
4.3.36	Procure Deployable & Fixed Telemetry Assets	PIM									8/16		2/16		
4.3.37	Begin Access Badging & Training	LSIM									10/6		2/6		
4.3.38	"LV & MU Eng Review Process (ERBs,ERSs,Req Rev,	TM	11/1											2/16	
4.3.39	Payload-LV Fitcheck	TM									8/25				
4.3.40	MIWG	MM													
4.3.41	Safety TIMS PSWG	SMA		1/18			10/24		6/11			8/21			
4.3.42	S/C PreShip Review	SC									8/15				
4.3.43	S/C Ships	SC									8/16				
4.3.44	Phase Close-Out	MM										11/16			

TM = Technical Management

LSIM = Launch Site Integration Manager

PIM = Program Integration Manager

HQ = NASA HQ & Mission Directorate

LSTO = LSTO (Mini Source Board)

SC = Spacecraft Project

LD = Launch Director

LV = Launch Vehicle Contractor

SMA = Safety & Mission Assurance

LSP = LSP Mgmt

MM = Mission Manager



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Kepler Mission Management

Dave Breedlove

LAUNCH SERVICES PROGRAM

Mission

Launch Date

Orbit Requirement

Launch Vehicle Class

Launch Period Window

PPF

Mass (kg)

PAD

Kepler
2009/02/16
C3 0.6 km2/sec2, Earth trailing heliocentric
Delta II
Commercial PPF
1181 kg
Other

Kepler

ICD

May	Jun	Jul
G	G	G

There are no signed SCNs

There are no SCNs in Review

Observatory Status

Observatory Status

Schedule

Budget

Deliverables

Testing

ATLO

Instrument

May	Jun	Jul
G	G	G
G	G	G
G	G	G
G	G	G
G	G	G
G	G	G
G	G	G

Launch Vehicle Status

Integrated Schedule

CDRLs (S/C & LSC)

Manifest/Range

Ground Stations

Deployables

P-3/OTTR

May	Jun	Jul
G	G	G
G	G	G
G	Y	Y
0	0	0
0	0	0
0	0	0

Mission Center:

Program:

PM

LVI

MM

IE

LSIM

PIM

MAM

MCE

MTE

JPL
Jim Fanson
Pete Darus
Dave Breedlove
Larry Craig
William Van Dyke
Randy Mizelle
Homero Hidalgo
Tuan Doan

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Kepler - Engineering

Larry Craig

LAUNCH SERVICES PROGRAM

	May	Jun	Jul
Launch Vehicle	0	G	G
Payload Fairing	0	G	G
First Stage	0	G	G
Second Stage	0	G	G
Third Stage	0	Y	Y
Payload Attach Fitting	0	G	G
Other	0	0	0
Mission Specific	0	G	G
Certification	0	N/A	N/A
Mission Analysis	0	G	G
ERS/ERB	0	G	G
Launch PAD/GSE	0	G	G
Mission Unique IV&V	0	N/A	0

REQUIREMENT VERIFICATION STATUS	
NUMBER OF REQUIREMENTS	0
VERIFIED TO DATE	0

LAUNCH PAD / GSE MODS (IF APPLICABLE)
IRD has requirement to use GN2 purge similar to MAP

MISSION UNIQUE STUDIES (IF APPLICABLE)
There are none.

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Kepler - Mission ERB Status

Larry Craig

LAUNCH SERVICES PROGRAM

R/Y/G	ERS #	TITLE	ERB Req?		Board Held?			Closure		
			Y	N	Y	N	N/A	AI	ENG.	OCE
0	05-379	Kepler IRD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0	08-148	Kepler ICD Review	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Kepler - Vehicle ERB Status

Larry Craig

LAUNCH SERVICES PROGRAM

There are no Vehicle ERBs for this mission.

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Kepler - Launch Site

William Van Dyke

LAUNCH SERVICES PROGRAM

	May	Jun	Jul
LSSP	G	G	G

LSSP	Planned	Released
Preliminary	11/16/07	11/20/07
Baseline	09/09/08	

	May	Jun	Jul
CUSTOMER INPUTS	G	G	G

	May	Jun	Jul
DELIVERABLES			
Security and Badging	G	G	G
Training and Personnel Cert	G	G	G
Contingency Plans	G	G	G
Safety LSIM	G	G	G
Radiation Control	G	G	G
Operational Plans	G	G	G

UNIQUE REQUIREMENTS

	May	Jun	Jul
LAUNCH SITE UNIQUE	G	G	G

PPF	G	G	G
------------	---	---	---

Spacecraft OPS	0	0	0
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Kepler Budget Breakdown

Randy Mizelle

LAUNCH SERVICES PROGRAM

The launch service budget includes:

* **Launch Services**

- Standard launch Vehicle Services provided by this contract. This line item is firm fixed price and has no flexibility.

* **Mission Uniques**

- Requirements necessary to customize basic vehicle hardware to meet unique s/c driven requirements.
- Other services directly attributable to the mission.
- Contains some flexibility except when technical risk is affected. Spacecraft requirements are the cost driver.

* **Integrated Services**

- LSP contractor support service (ELVIS, CAPPs, JBOSC, KICs, etc).
- USAF range costs attributable to the mission
- Limited flexibility

* **Payload Processing Facility**

- Government facility: spacecraft customers are required to be processed in a government facility if the mission is planetary or has nuclear requirements
- Commercial facility: all other missions have been directed to process in a commercial facility;
- Contains some budget flexibility. Additional spacecraft cleanliness requirements or hazardous requirements may increase PPF costs.

* **Telemetry**

- Assets required to meet minimum launch vehicle telemetry requirements.
- Includes fixed and deployable ground stations, instrumented aircraft, and ocean assets.
- Limited flexibility requirements are often set late in the integration cycle.

* **Fly Out**

- Costs that each mission in the 19-Pack must incur.
- Long lead material procurement to mitigate risks due to gaps in production and supplier orders.
- Post-production support for labor skill retention, procure, manufacture, store and maintain under configuration control, mission critical spare parts.
- Pad Sustainability costs for SLC-2 and SLC-17.
- No flexibility-contract costs

* **Nuclear**

- RTG/RHU processing
- RTG/RHU databooks and approval
- Limited flexibility

* **Reimbursable**

- Reimbursable FC for transportation, labor, and CMO.

* **Mission Flexibility**

- Portion of the mission budget available for funding additional task assignments, non-standard services or meeting unexpected requirements.

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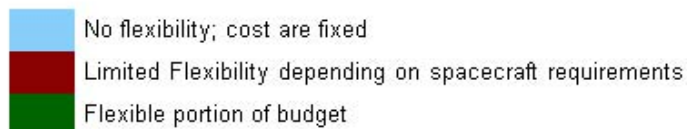
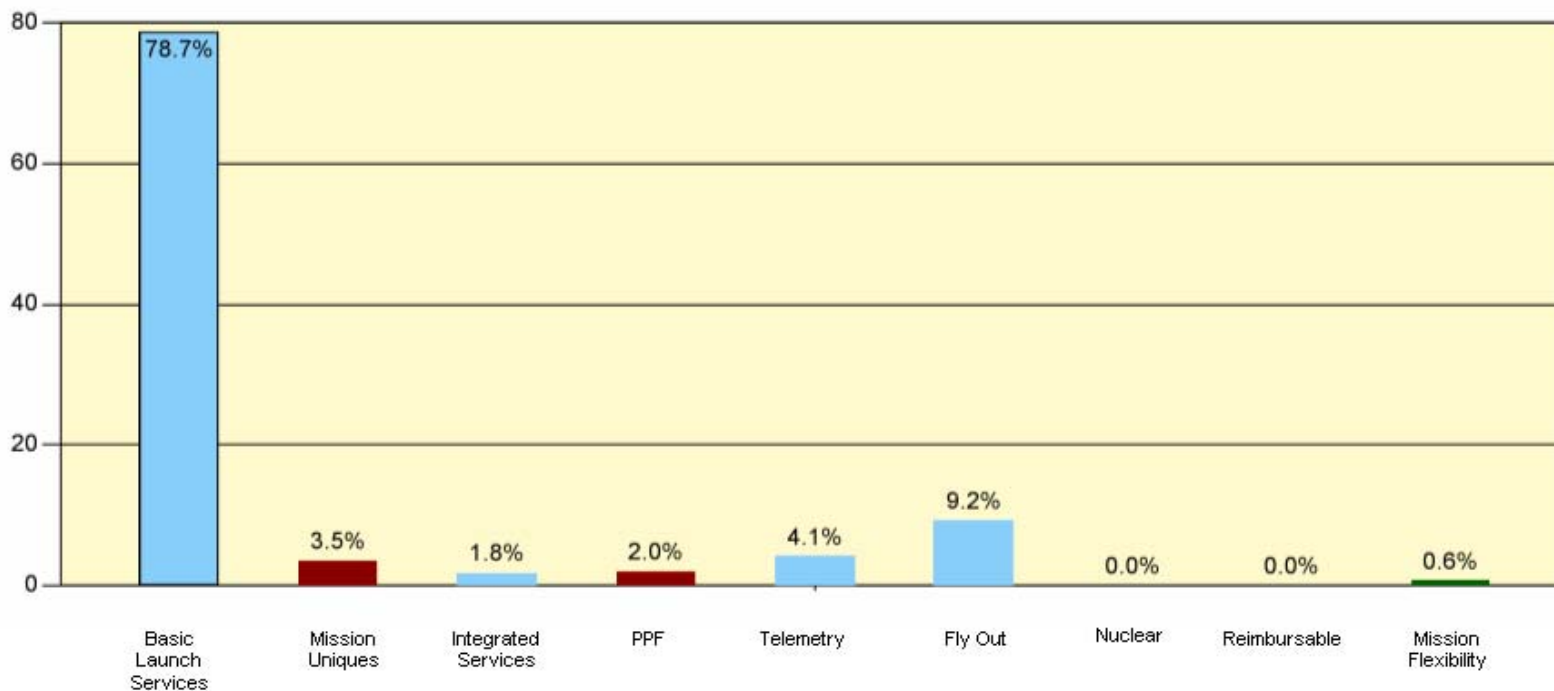
Launch Services Budget Breakdown

Kepler Mission

Randy Mizelle

LAUNCH SERVICES PROGRAM

% of Total Launch Service Cost - 7 / 2008



Notes:

Above percentages contain dollars associated with the Boeing settlement.
Boeing settlement for this mission is \$645.0K.

No variance since January report.

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Kepler - Business

Randy Mizelle

LAUNCH SERVICES PROGRAM

Budget

Contracts

May	Jun	Jul
G	G	G
G	G	G

Milestone	Date
Milestone #1	12/04/2006
Milestone #2	03/06/2007
Milestone #3	07/09/2007
Milestone #4	03/18/2008
Milestone #5	03/18/2008
Milestone #6	07/14/08
Milestone #7	08/16/2008
Milestone #8	11/16/2008
Milestone #9	02/16/2008

<input type="checkbox"/>	Open Milestone Payment
<input type="checkbox"/>	Paid Milestone

Contract Status		
Launch Services		
Contract Mod	Number	Description
	100	NSS 20.3.3/Quick Turnaround CLA
	152	NSS 20.3.2 Preliminary Performance/Trajectory Analysis
	178	NSS 20.3.4 Final Design Load Cycle
	125	NSS 33.1 Post Production Support CY05 (flyout)
	229	KEPLER Test Payload Attach Fitting (PAF)
	242	NSS 20.2 Early MIWG NSS 20.3.2 Preliminary Performance/Trajectory Analysis NSS 20.3.3 Quick Turnaround Coupled Loads Analysis
	125	NSS 30.1 Long-lead Mat'l/Adv NSS 33.1 Post Prod Spt (FY05)
	255	CLIN 21 Kepler Basic Launch Service
	255	NSS 2.1.1 Replace 10-ft w/10L PLF

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Contract Mod	Number	Description		
	255	NSS 20.1 Pedigree Review		
	255	NSS 20.3.4 Final Design Load Analysis		
	255	NSS 9.1.2 Two 61-pin connectors		
	255	NSS 2.1.2 Replace 9ft Fairing with 10ft Fairing		
	0272	Cancel NSS 20.3.2 Preliminary Performance/Trajectory Analysis		
	255	ATP Mission		
	240	NSS 32.1 VAFB Launch Site O&M and NSS 33.1 Post Production Support		
	0306	Launch delay from 11/01/08 to 02/16/09.		
	309	NSS 35.2 Additional 40 Mission Console Notebooks		
There are no LD Contract Mods				
Task Assignments	Number	Description	Completion Date	Invoice Paid Date
	NLSB-210R1	TPAF Support	11/1/2006	01/17/2007
	NLSB-221	TA NLSB-254 HGA Relocation Evaluation	09/15/2006	09/20/2006
	NLSB-245R1	61-Pin Connectors additional Material	12/18/2006	01/17/2007
	NLSB-253	Additional Integrated Thermal Analysis.	03/01/2007	03/19/2007
	NLSB-286	Kepler Line-Load Analysis	06/08/2007	01/08/2008
	NLSB-305R3	Lightning Detection System and Radio Frequency Detection System Installation onto Pad SLC-17B	04/16/2008	07/02/2008
	NLSB-308	Electrical Interface Test Connectors	04/30/2008	06/06/2008
	NLSB-316	Electrical Connector Interface Bracket	08/19/2008	
Contract Mod (PPF)	Number	Description		
	NNK08LA75D	East Coast Payload Processing Capability		
There are no Other Contract Mods				
	Issues			
G	Mission has 0 days of grace remaining and the next notification point for a potential launch delay is 08/15/2008 for either Government or Contractor (L-6 mo. + 1 Day).			
0	Coordinating launch date adjustment caused by launch vehicle timers issue with the launch services provider.			

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Center

Kepler - Safety and Mission Assurance

Homero Hidalgo

LAUNCH SERVICES PROGRAM

Assurance Verification Areas	Status		Evidence of Completion			
	Complete	In Work		May	Jun	Jul
Quality				Y	Y	Y
Software / Hardware Problems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Currently re-evaluating the ULA-Boeing's Quality Management System risk.	Y	Y	Y
Alerts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	SMA is tracking no GIDEP issues at this time.	G	G	G
Audits/Inspections/Surveillances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	SMA Quality is continuing to follow the corrective actions implemented by Pac Sci from the MDA audit.	G	Y	Y
Limited Life Items	<input type="checkbox"/>	<input checked="" type="checkbox"/>	SMA is tracking no LLI issues at this time.	G	G	G
Reliability				G	G	G
FMEA/Fishbones/Equivalent	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No FMEA/Fishbones/Equivalent have been identified	G	G	G
Reliability Assessments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The reliability data gathering task is continuing	G	G	G
Safety				G	G	G
Requirements Definitions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No issues	G	G	G
Range Safety & Mission Flight Rules	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues	G	G	G
Licenses/Use Authorizations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues	G	G	G
Safety Documentation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues	G	G	G
Non-compliances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Expecting Noncompliance for prop F&D valves	G	G	G
Contingency Planning	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No status	G	G	G
Mission Assurance				Y	Y	Y
Lessons Learned	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues.	G	G	G
First Flight/Mission Unique items	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues	G	G	G
Test/Qualification/Certification	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues	G	G	G
Mission Assurance Assessments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Alenia 2nd-Stage Oxidizer Leak, inspection process ID; ULA transition	Y	Y	Y
Risk Management	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues	G	G	G

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Kepler Comm & Telemetry

Tuan Doan

LAUNCH SERVICES PROGRAM

Communications

Voice Comm
Data Comm
Networks
Video Comm
Timing
RF Comm
LSSP Comm Annex

May	Jun	Jul
G	G	G
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

Telemetry

Decommuration Tables
Data Integrity Test
Software Lockdown
Software Inventory
Console Configuration
Console Checkout

May	Jun	Jul
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

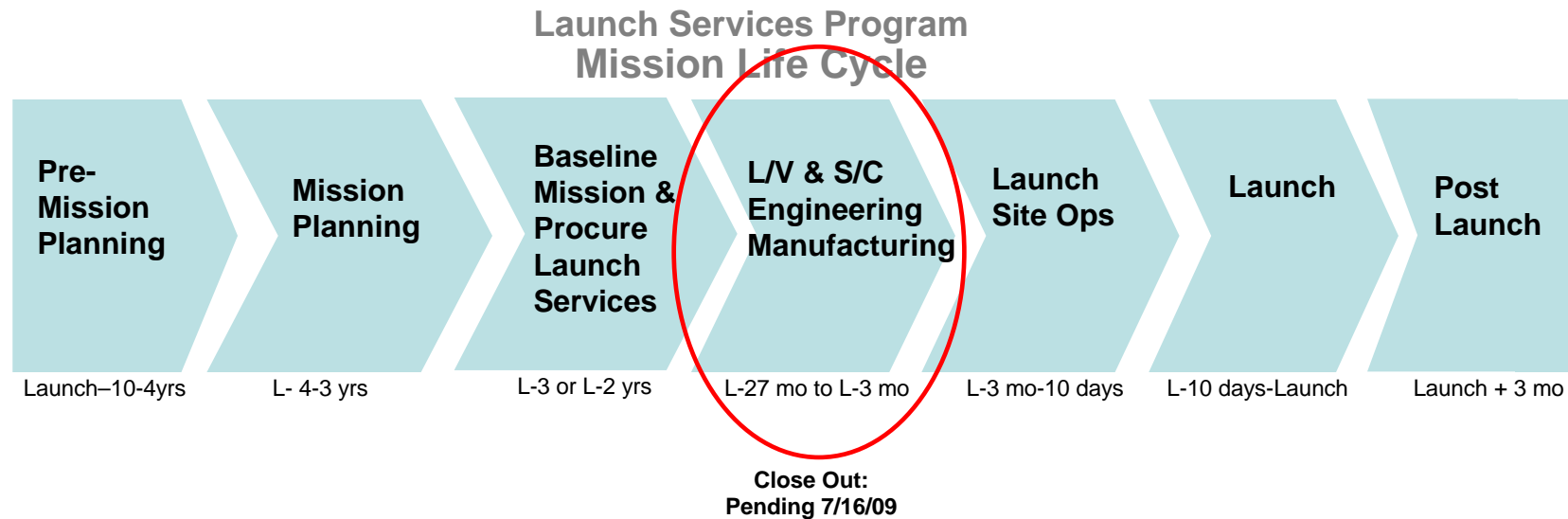
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WISE

Launch Date: 11/1/09





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WISE Project Summary

LAUNCH SERVICES PROGRAM

Mission	WISE
Launch Date	2009/11/01
Launch Vehicle	Delta II
Launch Period Window	Any day of year
PPF	Commercial PPF

	May	Jun	Jul
OVERALL MISSION	Y	Y	0

MISSION MANAGEMENT

	May	Jun	Jul
Observatory Status	G	G	G
Manifest/Range	G	G	G
Integrated Schedule	G	G	G
ICD	G	G	G
CDRLs (S/C & LSC)	G	G	G

LAUNCH SITE

	May	Jun	Jul
LSSP	G	G	G
Customer Inputs	G	G	G
PPF	G	G	G
Launch Site Unique	G	G	G
Spacecraft OPS	G	G	G

SAFETY & MISSION ASSURANCE

	May	Jun	Jul
Mission Assurance	Y	Y	Y
Safety	G	G	G
Quality	Y	Y	Y
Reliability	G	G	G

ENGINEERING

	May	Jun	Jul
Launch Vehicle	R	R	R
Mission Specific	G	G	G
Certification	G	G	G
Mission Analysis	G	G	G
ERS/ERB	G	G	G
Launch PAD/GSE	G	G	G
Mission Unique IV&V	N/A	N/A	N/A

COMM & TELEMETRY

	May	Jun	Jul
Communications	0	0	G
Telemetry	0	0	0

BUSINESS

	May	Jun	Jul
Budget	G	G	G
Contracts	Y	Y	Y

LEGEND

Proceeding on Plan
 Area of Concern
 Significant Problem
 Not Evaluated
 Not Applicable

G
Y
R
0
N/A

DOWNRANGE TELEMETRY

	May	Jun	Jul
Ground Stations	G	G	G
Deployables	G	G	G
P-3/OTTR	G	G	G

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WISE - Open/Accepted Risks

LAUNCH SERVICES PROGRAM

		Condition
RYG Trend	RiskID	Consequence
0	V0046	ULA/Boeing does not perform an inspection for microscopic cracks before providing a spacecraft customer with a test payload attach fitting (TPAF) or clampband.
		Propagation of a micro crack(s) in the TPAF or clampband during shock or vibration testing could cause damage to the spacecraft.
0	V0052	LS SMA has noted human error and process issues that indicate that Boeing's quality management system corrective actions are not preventing re-occurrence.
		The re-occurrence of undetected human errors and process problems can lead to major damage or loss of flight hardware or GSE.
0	V0050	Dawn experienced a significant delay very late in the hardware production process that delayed the launch readiness date. The same contributing causes exist for other NASA missions.
		Possible delay of other NASA missions.
0	P0018	Traditional DMCO Testing (Bldg AO on CCAFS) on Commercial and NASA Delta II launch vehicles will be eliminated. Required testing that has historically been performed in DMCO will be transferred to the launch pad as part of the "DMCO On-Pad Initiative."
		Elimination of traditional DMCO Testing will not allow for capturing hardware failures off-pad, and thus introduce potential for on-pad schedule delays of more than one key milestone if hardware fails during pad testing.

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6-10%
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1-5%



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IMPACT

0	V0047	Failure analysis of a Pacific Scientific PN 107800-201 detonator (SN 4498) that failed service life extension testing uncovered a manufacturing process vulnerability in which detonators could be reworked and inadvertently returned to production without the correct load of explosive material.
		Failure to initiate FTS destruct ordnance chain on command.
0	V0057	During accelerated age testing on 9/28/07 a GG TLX line from lot UCO07001-002 failed to produce output
		Failure of the GG TLX will cause all six ground ignited GEMs to remain attached to the LV resulting in a mission failure
Y	M0XXX	The standard 3715C PAF subcontractor cannot support hardware delivery.
		3715C Payload Attach Fitting (PAF) may not be delivered in time to meet the spacecraft customer's fit check schedule.



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WISE - Actions / Issues / Concerns

LAUNCH SERVICES PROGRAM

There are no Actions.

Mission Summary Map	G/Y/R	ISSUES / CONCERNS	WI/ERS/Risk/ Problem	Open Date	Due Date
Engineering	0	LS SMA has noted human error and processing issues that indicate that Boeing's quality management system corrective actions are not preventing re-occurrence. The re-occurrence of undetected human errors and process problems can lead to major damage or loss of flight hardware or GSE.	Risk V0052	8/31/07	
Engineering	0	DAWN experienced a significant delay very late in the hardware production process that delayed the launch readiness date. The same contributing causes exist for other NASA missions. Possible delay for other NASA missions.	Risk V0050	8/31/07	
Engineering	0	Traditional DMCO Testing (Bldg AO on CCAFS) on Commercial and NASA Delta II launch vehicles will be eliminated. Required testing that has historically been performed in DMCO will be transferred to the launch pad as part of the "DMCO On-Pad Initiative." Elimination of traditional DMCO testing will not allow for capturing hardware failures off-pad, and thus introduce potential for on-pad schedule delays of more than one key milestone if hardware fails during pad testing.	Risk P0018	8/31/07	
Engineering	0	Failure analysis of a Pacific Scientific PN 107800-201 detonator (SN 4498) that failed service life extension testing uncovered a manufacturing process vulnerability in which detonators could be reworked and inadvertently returned to production without the correct load of explosive material. Failure to initiate FTS destruct ordnance chain on command. Mission specific pyro verif needed.	Risk V0047	8/30/07	

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Mission Summary Map	G/Y/R	ISSUES / CONCERNS	WI/ERS/Risk/ Problem	Open Date	Due Date
Engineering	G	Kick off MIWG Strength results for Flight Design Load Cycle (FDLC) reported low strength margin of safety. Clampband gapping margin of safety is low. Clampband pre-load required is high. This drives a higher than expected shock load. Analysis used 200 lbf sep springs instead of 100 lbf. Discussion of dynamic uncertainty factor (DUF) is in work. (7/13/08, J. Hoffman) Project is implementing a soffride system with LSP assistance.	WI	10/3/07	12/01/2008
Mission Management	Y	ULA reports that the 3715C Payload Attach Fitting (PAF) supplier will no longer produce the PAF. ULA is evaluating options and preparing for discussion with NASA. (7/13/08, J. Hoffman) Combined ULA/NASA ERB on 6/26/08 concluded that the SAAB PAF Option should be the primary path. The Astrium PAF option was rejected. Saab PAF PDR is scheduled for 7/29/08.	Problem	4/15/2008	12/01/2008
Engineering	G	RF Inhibits - Project reported their S/C S-band system lacks the ULA required minimum two inhibits. JPL to provide additional data in case a waiver is required.	WI	5/12/08	08/01/2008



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WISE - Significant Events

LAUNCH SERVICES PROGRAM

Accomplished	
Quick turn around CLA on contract	Mar 06
S/C Questionnaire transmittal to ULA	10/31/2007
Early MIWG/GOWG	Nov 06
Confirmation Review	Oct 06
Authority To Proceed (ATP) w/27 mo integration cycle.	08/01/2007
S/C CDR	4/3/07
Hydrogen and Cryo GSE study	08/09/2007-12/12/2007
Mission CDR	06/20/2007
PRCB for ATP Concurrence	07/27/2007
Kickoff MIWG	10/3/07
Mission Turn On ERB	7/31/07-7/31/07
Vent Stack TIM at VAFB	12/12/2007
MIWG @ KSC	2/20/08-2/20/08
Hydrogen Cryostat Vent Stack CDR	6/26/08
Receive ICD Initial Draft	5/12/08-5/12/08

Planned	
Kickoff GOWG @ VAFB	TBD
WISE MIWG	07/15/2008

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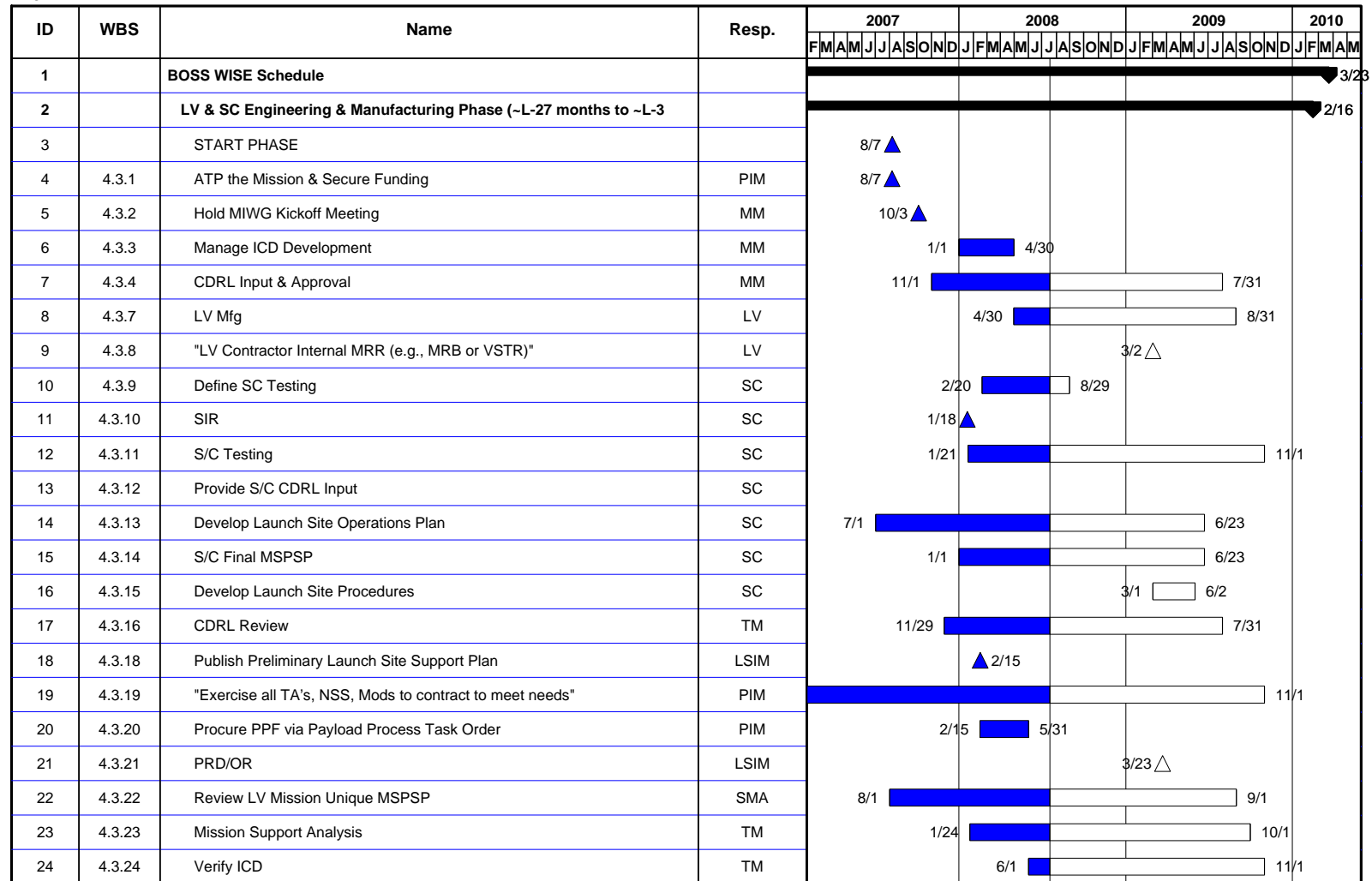
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BOSS WISE Schedule

LSP-F-330.02 Basic

Page 1 of 2

7/17/08



TM = Technical Management

HQ = NASA HQ & Mission Directorate

LD = Launch Director

LSP = LSP Mgmt

LSIM = Launch Site Integration Manager

LSTO = LSTO (Mini Source Board)

LV = Launch Vehicle Contractor

MM = Mission Manager

PIM = Program Integration Manager

SC = Spacecraft Project

SMA = Safety & Mission Assurance

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LSP-F-330.02 Basic

7/17/08

TM = Technical Management	HQ = NASA HQ & Mission Directorate	LD = Launch Director	LSP = LSP Mgmt
LSIM = Launch Site Integration Manager	LSTO = LSTO (Mini Source Board)	LV = Launch Vehicle Contractor	MM = Mission Manager
PIM = Program Integration Manager	SC = Spacecraft Project	SMA = Safety & Mission Assurance	



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WISE Mission Management

Armando Piloto

LAUNCH SERVICES PROGRAM

Mission

Launch Date

Orbit Requirement

Launch Vehicle Class

Launch Period Window

PPF

Mass (kg)

PAD

WISE
2009/11/01
725km sun sync 6 am or pm ascending node
Delta II
Any day of year
Commercial PPF
1387
SLC-2

Observatory Status

Observatory Status

Schedule

Budget

Deliverables

Testing

ATLO

Instrument

May	Jun	Jul
G	G	G
G	G	G
G	G	G
G	G	G
Y	Y	Y
G	G	G
G	G	G

Mission Center:

Program:

PM

LVI

MM

IE

LSIM

PIM

MAM

MCE

MTE

JPL
Explorer
Bill Irace
Pete Darus
Armando Piloto
Jim Hoffman
Jeffrey Ehram
Randy Mizelle
Homero Hidalgo
Tuan Doan



ICD

May	Jun	Jul
G	G	G

There are no signed SCNs

SCNS IN REVIEW

SCN #	DATE SIGNED
ICD Pending	

Launch Vehicle Status

Integrated Schedule

CDRLs (S/C & LSC)

Manifest/Range

Ground Stations

Deployables

P-3/OTTR

G	G	G
G	G	G
G	G	G
G	G	G
G	G	G
G	G	G

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WISE - Engineering

Jim Hoffman

LAUNCH SERVICES PROGRAM

	May	Jun	Jul
Launch Vehicle	R	R	R
Payload Fairing	G	G	G
First Stage	G	G	G
Second Stage	G	G	G
Third Stage	N/A	N/A	N/A
Payload Attach Fitting	R	R	R
Other	N/A	N/A	N/A
Mission Specific	G	G	G
Certification	G	G	G
Mission Analysis	G	G	G
ERS/ERB	G	G	G
Launch PAD/GSE	G	G	G
Mission Unique IV&V	N/A	N/A	N/A

REQUIREMENT VERIFICATION STATUS	
NUMBER OF REQUIREMENTS	0
VERIFIED TO DATE	0

LAUNCH PAD / GSE MODS (IF APPLICABLE)
Evaluating the pad impacts of servicing the S/C Hydrogen Cryostat

MISSION UNIQUE STUDIES (IF APPLICABLE)
Evaluating methods to reduce the high lateral loads CLA results

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WISE - Mission ERB Status

Jim Hoffman

LAUNCH SERVICES PROGRAM

R/Y/G	ERS #	TITLE	ERB Req?		Board Held?			Closure		
			Y	N	Y	N	N/A	AI	ENG.	OCE
G	ERS-07-272 (TBS)	Mission ICD ERB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	08-51 (TBS)	WISE Hydrogen Vent Stack Design	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Y	08-118	3715C Qual PAF for WISE Mission	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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WISE - Vehicle ERB Status

Jim Hoffman

LAUNCH SERVICES PROGRAM

R/Y/G	ERS #	TITLE	ERB Req?		Board Held?			Closure		
			Y	N	Y	N	N/A	AI	ENG.	OCE
0	06-284	2nd Stage Tank Leak (WISE Mission Specific ERB)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	07-40	Goodrich Analysis of Leach and Tyco Relay Failures (long term fix)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	07-308	delta II GG TLX Output Failure (flt specific)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	07-366	COSMO-2 1st Stage Engine Mixture Ratio Observation (flt specific)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	08-29	40Ah Common Battery for Delta II and delta IV (possible first flt for WISE)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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WISE - Launch Site

Jeffrey Ehram

LAUNCH SERVICES PROGRAM

	May	Jun	Jul
LSSP	G	G	G

LSSP	Planned	Released
Preliminary	02/15/2008	02/01/2008
Baseline	05/01/2009	

	May	Jun	Jul
CUSTOMER INPUTS	G	G	G

	May	Jun	Jul
DELIVERABLES			
Security and Badging	G	G	G
Training and Personnel Cert	G	G	G
Contingency Plans	G	G	G
Safety LSIM	G	G	G
Radiation Control	G	G	G
Operational Plans	G	G	G

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UNIQUE REQUIREMENTS

	May	Jun	Jul
LAUNCH SITE UNIQUE	G	G	G
Two 500liter dewars of liquid helium to be replaced every day on Level 5 at SLC-2. Level 5 modifications required for dewars and cryo servicing GSE. Fairing strongbacks need relocation. Initial Study TA was functionally completed on 12 Dec 2007. Next step is a pathfinder TA. ULA Proposal received. JPL concerned about budget and placed proposal process on hold for de-scoping. De-scope complete; ULA proposal acceptable; expect ATP before 15 July 2008.	G	G	G
Design/Install hydrogen vent stack at PPF, SLC-2 MST and Boeing Can. Initial Study TA shows MSX vent design satisfactory. Next step is fabrication TA. ULA proposal acceptable. ATP was April 17 2008. ERB design review was 6 June 2008; fabrication started.	G	G	G
PPF	G	G	G
Spacecraft OPS	G	G	G



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WISE Budget Breakdown

Randy Mizelle

LAUNCH SERVICES PROGRAM

The launch service budget includes:

* **Launch Services**

- Standard launch Vehicle Services provided by this contract. This line item is firm fixed price and has no flexibility.

* **Mission Uniques**

- Requirements necessary to customize basic vehicle hardware to meet unique s/c driven requirements.
- Other services directly attributable to the mission.
- Contains some flexibility except when technical risk is affected. Spacecraft requirements are the cost driver.

* **Integrated Services**

- LSP contractor support service (ELVIS, CAPPs, JBOSC, KICs, etc).
- USAF range costs attributable to the mission
- Limited flexibility

* **Payload Processing Facility**

- Government facility: spacecraft customers are required to be processed in a government facility if the mission is planetary or has nuclear requirements
- Commercial facility: all other missions have been directed to process in a commercial facility;
- Contains some budget flexibility. Additional spacecraft cleanliness requirements or hazardous requirements may increase PPF costs.

* **Telemetry**

- Assets required to meet minimum launch vehicle telemetry requirements.
- Includes fixed and deployable ground stations, instrumented aircraft, and ocean assets.
- Limited flexibility requirements are often set late in the integration cycle.

* **Fly Out**

- Costs that each mission in the 19-Pack must incur.
- Long lead material procurement to mitigate risks due to gaps in production and supplier orders.
- Post-production support for labor skill retention, procure, manufacture, store and maintain under configuration control, mission critical spare parts.
- Pad Sustainability costs for SLC-2 and SLC-17.
- No flexibility-contract costs

* **Nuclear**

- RTG/RHU processing
- RTG/RHU databooks and approval
- Limited flexibility

* **Reimbursable**

- Reimbursable FC for transportation, labor, and CMO.

* **Mission Flexibility**

- Portion of the mission budget available for funding additional task assignments, non-standard services or meeting unexpected requirements.

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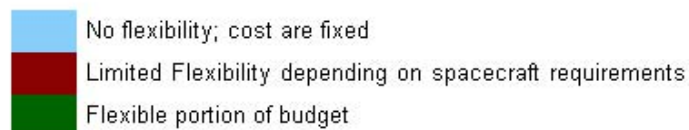
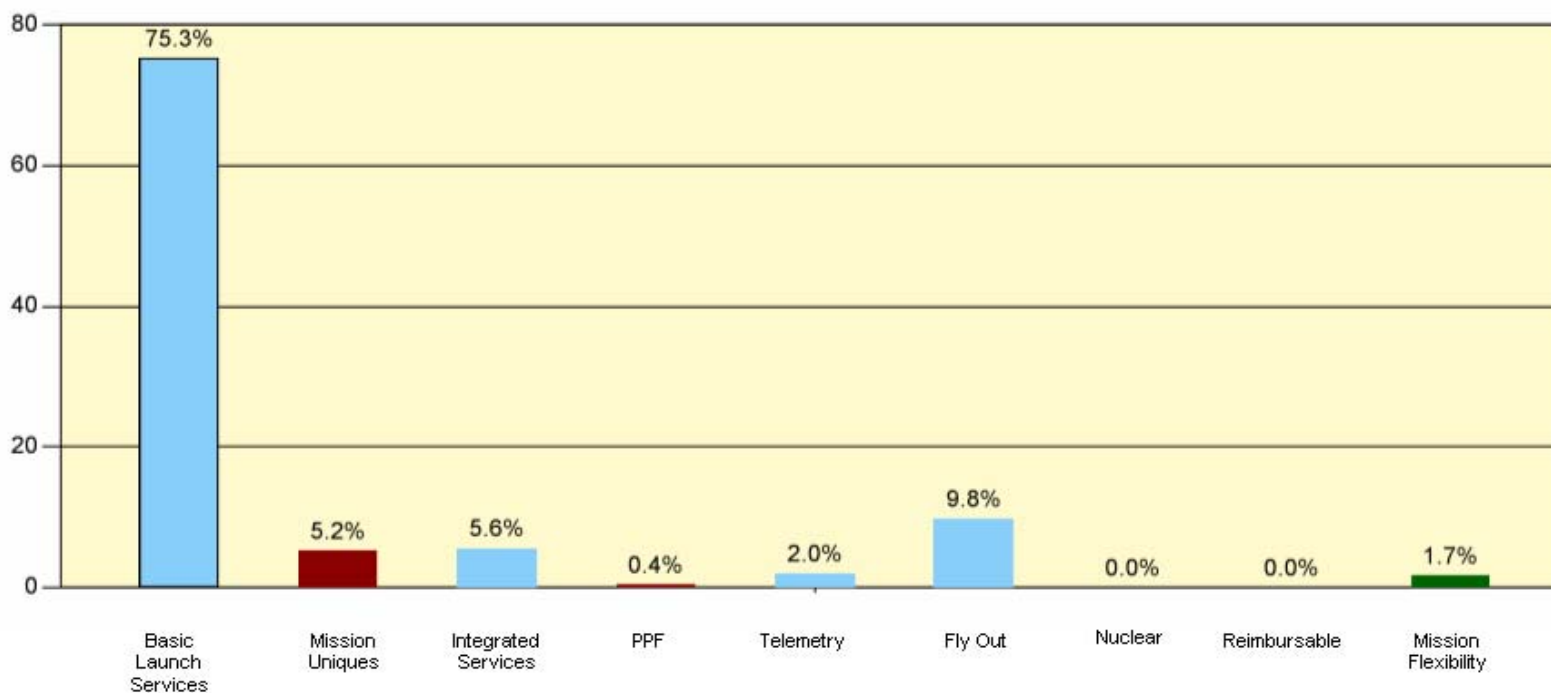
Launch Services Budget Breakdown

WISE Mission

Randy Mizelle

LAUNCH SERVICES PROGRAM

% of Total Launch Service Cost - 7 / 2008



Notes:

Flexibility change from 1.2% to 2.2% due to math error in the total budget number in the chart database. However, updated budget number is in sync with KSC, HQ and JPL budget numbers. Mission requirements did not change during this period.

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WISE - Business

Randy Mizelle

LAUNCH SERVICES PROGRAM

Budget

Contracts

May	Jun	Jul
G	G	G
Y	Y	Y

Milestone	Date
Milestone 1	09/26/2007
Milestone 2	12/18/2007
Milestone 3	05/30/2008
Milestone 4	05/30/2008
Milestone 5	08/01/2008
Milestone 6	11/01/2008
Milestone 7	02/01/2009
Milestone 8	05/01/2009
Milestone 9	08/01/2009
Milestone 10	11/01/2009

<input type="checkbox"/>	Open Milestone Payment
<input type="checkbox"/>	Paid Milestone

Contract Status		
Launch Services		
Contract Mod	Number	Description
	NLSB-60	12/11/02 FPB directed change in MIDEX-6 (CLIN 25) Vehicle config. From 2420-10 to 2425-10
	NLSB-191	8/26/05 FPB directed the renaming of CLIN 25 from MIDEX-6 to "WISE"; establishment of the launch site as VAFB; and change of vehicle config. From 2425-10 to 2320-10
	NLSB-214	NSS 20.3.3 Early CLA
	NLSB-236	12/6/2005 FPB directed change to WISE Launch Date from 3/31/08 to 6/14/09
	NLSB-242	NSS 20.2 Early MIWG
	NLS-B 257	NSS 20.3.4 Final Design Load Cycle
	NLSB-265	Adjust launch date from June 14, 2009 to November 1, 2009.
	295	ATP Mission
	295	NSS 30.2 Long Lead Material Liquidation Credit

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Contract Mod	Number	Description		
	295	NSS 2.2.3 Additonal 24 -inch diameter door		
	295	NSS 3.1.3 3715C Payload Adapter		
	295	NSS 35.2 Additional 40 Mission Console Notebooks		
	295	NSS 20.1 Pedigree Review		
	295	NSS 27.1 Western Range (WR) Launch Incremental		
	125	NSS 30.1 Long-lead Mat'l/Adv NSS 33.1 Post Prod Support		
	240	NSS 32.1 VAFB Launch Site O&M and NSS 33.1 Post Production		
There are no LD Contract Mods				
Task Assignments	Number	Description	Completion Date	Invoice Paid Date
	NLSB-299R1	Fabrication and testing of Hydrogen Vent Stack on the SLC-2 Mobil Service Tower and Transportation Canister	11/10/2007	02/26/2008
	NLSB-304	37-Pin electrical connectors	10/04/2007	02/26/2008
	NLSB-307	Test PAF Inspection	01/20/2008	02/26/2008
	NLSB-325	Fabrication and Testing of Hydrogen Vent Stacks on the SLC-2 MST and Transportation Canister	09/30/2008	
Contract Mod (PPF)	Number	Description		
	NNK07LA79B	Basic Payload Processing Task Order		
There are no Other Contract Mods				
	Issues			
G	Mission has 120 days of grace remaining and the next notification point for a potential launch delay is 10/31/2008 for either Government or Contractor (L-12 mo + 1 Day).			
Y	PAF subcontractor submitted no-bid for this contract; coordinating alternative options with launch services contractor.			

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WISE - Safety and Mission Assurance

Homero Hidalgo

LAUNCH SERVICES PROGRAM

Assurance Verification Areas	Status		Evidence of Completion			
	Complete	In Work		May	Jun	Jul
Quality				Y	Y	Y
Software / Hardware Problems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Currently re-evaluating the ULA-Boeing's Quality Management System risk.	Y	Y	Y
Alerts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	SMA is tracking no GIDEP issues at this time.	G	G	G
Audits/Inspections/Surveillances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	SMA Quality is continuing to follow the corrective actions implemented by Pac Sci from the MDA audit.	G	Y	Y
Limited Life Items	<input type="checkbox"/>	<input checked="" type="checkbox"/>	SMA is tracking no LLI issues at this time	G	G	G
Reliability				G	G	G
FMEA/Fishbones/Equivalent	<input type="checkbox"/>	<input checked="" type="checkbox"/>		G	G	G
Reliability Assessments	<input type="checkbox"/>	<input checked="" type="checkbox"/>		G	G	G
Safety				G	G	G
Requirements Definitions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No Issues at this time	G	G	G
Range Safety & Mission Flight Rules	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No Issues at this time	G	G	G
Licenses/Use Authorizations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No Issues at this time	G	G	G
Safety Documentation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No Issues at this time	G	G	G
Non-compliances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No Issues at this time	G	G	G
Contingency Planning	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No Issues at this time	G	G	G
Mission Assurance				Y	Y	Y
Lessons Learned	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No Issues at this time	G	G	G
First Flight/Mission Unique items	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Cryo Vent Stack effort in progress; no current issues: New PAF vendor ID	G	G	G
Test/Qualification/Certification	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No Issues at this time	G	G	G
Mission Assurance Assessments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Alenia 2nd-Stage Oxidizer Leak, inspection process ID; ULA transition; High shock loads from clampband separation;	Y	Y	Y
Risk Management	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No Issues at this time	G	G	G

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WISE Comm & Telemetry

Tuan Doan

LAUNCH SERVICES PROGRAM

Communications

Voice Comm
Data Comm
Networks
Video Comm
Timing
RF Comm
LSSP Comm Annex

May	Jun	Jul
0	0	G
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

Telemetry

Decommuration Tables
Data Integrity Test
Software Lockdown
Software Inventory
Console Configuration
Console Checkout

May	Jun	Jul
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

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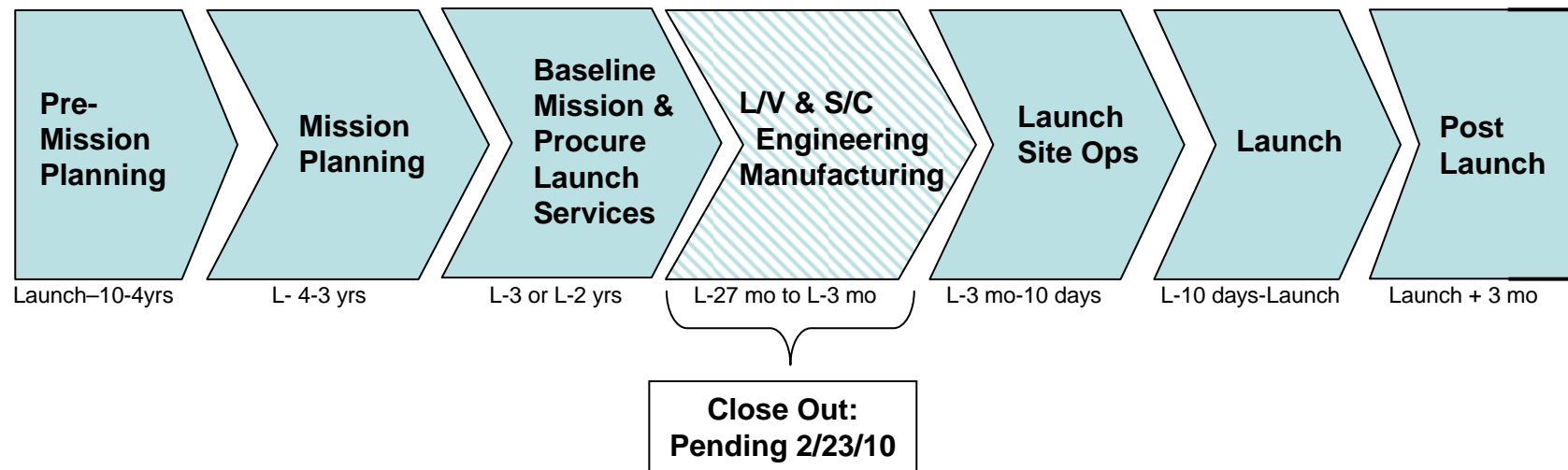
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Aquarius

Launch Date: 5/23/10

Launch Services Program Mission Life Cycle





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Aquarius Project Summary

LAUNCH SERVICES PROGRAM

Mission	Aquarius
Launch Date	2010/05/23
Launch Vehicle	Delta II
Launch Period Window	
PPF	Commercial PPF

	May	Jun	Jul
OVERALL MISSION	G	O	G

MISSION MANAGEMENT

	May	Jun	Jul
Observatory Status	G	G	G
Manifest/Range	G	G	G
Integrated Schedule	G	G	G
ICD	O	O	O
CDRLs (S/C & LSC)	G	G	G

LAUNCH SITE

	May	Jun	Jul
LSSP	G	G	G
Customer Inputs	G	G	G
PPF	G	G	G
Launch Site Unique	G	G	G
Spacecraft OPS	G	G	G

SAFETY & MISSION ASSURANCE

	May	Jun	Jul
Mission Assurance	G	G	Y
Safety	G	G	G
Quality	G	G	Y
Reliability	G	G	G

ENGINEERING

Launch Vehicle	G	G	G
Mission Specific	G	G	G
Certification	O	O	N/A
Mission Analysis	G	G	G
ERS/ERB	G	G	G
Launch PAD/GSE	G	G	G
Mission Unique IV&V	O	O	N/A

COMM & TELEMETRY

Communications	O	G	O
Telemetry	O	O	O

BUSINESS

Budget	Y	Y	Y
Contracts	G	G	G

LEGEND

Proceeding on Plan
 Area of Concern
 Significant Problem
 Not Evaluated
 Not Applicable

G
Y
R
O
N/A

DOWNRANGE TELEMETRY

Ground Stations	O	O	O
Deployables	O	O	O
P-3/OTTR	O	O	O

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LAUNCH SERVICES PROGRAM

P R C B C F C C C U R R E N C E	5 91-100%	Green	Yellow	Red	Red	Red
	4 51-90%	Green	Yellow	Yellow	Red	Red
	3 11-50%	Green	Yellow	Yellow	Yellow	Red MC272
	2 6-10%	Green	Green	Green	Yellow	Yellow
	1 1-5%	Green	Green	Green	Green	Yellow
		1	2	3	4	5
						IMPACT



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Aquarius - Actions / Issues / Concerns

LAUNCH SERVICES PROGRAM

There are no Actions.

Mission Summary Map	G/Y/R	ISSUES / CONCERNS	WI/ERS/Risk/Problem	Open Date	Due Date
Mission Management	0	Mission LRD moved to July 09, still further risk of moving with possible LRD in 2010. Mission LRD planing date now 22 May 2010, FPB action to confirm date by Oct 5, 2007. PMC planned for 30 October at HQ	WI	01/10/2007	11/02/2007
Business	0	Possible increased LV and O&M costs due to proposed LRD in 2010,	WI	09/19/2007	10/01/2008

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Aquarius - Significant Events

LAUNCH SERVICES PROGRAM

Accomplished	
Instrument PDR	06/28/2005-06/30/2005
Spacecraft PDR	08/03/2005-08/04/2005
Mission Confirmation Review held	09/28/2005
Program Intro / Range Concept Briefing at VAFB	12/16/2005
Quick turnaround CLA	
Instrument CDR at JPL	09/18/2006-09/22/2006
TFA data delivery	9/11/2006
Deliver Final SSPP and Initial MSPSP to the Range	09/15/2006
JPL to perform RF monitoring at SSI and Astrotech	08/30/2006-08/31/2006
Kick-Off Meeting with ULA	March 2008-03/28/2008
IRD	07/13/2007-10/12/2007
Ground Ops/Launch vehicle TIM	October 2007
Full CLA planned prior to ATP	09/03/2007-12/10/2007
DPMC on schedule re-plan on 16 November	11/16/2007-11/30/2007

Planned	
SC Mission CDR	July 2008
ATP for mission	11/30/2007-11/30/2007
TPAF installation for EM in Brazil	05/29/2008-06/04/2008
EM shock test	06/26/2008-07/03/2008

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BOSS AQUARIUS Schedule

LSP-F-330.02 Basic

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ID	WBS	Name	Resp.	2008		2009				2010				2011
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
1		BOSS Aquarius Schedule				3/5								
2		Baseline & Procure Launch Services Phase (~L-2 to 3 years)				3/5				2/23				
3		START PHASE				3/5								
4	3.3.1	Assign LSTO Team	LSP			3/6	<input type="checkbox"/>	4/2						
5	3.3.2	Prepare Final SC IRD	MM			4/3	<input type="checkbox"/>	4/30						
6	3.3.3	Review Requirements & IRD	LSTO			5/1	<input type="checkbox"/>	5/28						
7	3.3.4	Submit IRD	SC			5/28								
8	3.3.5	Prepare/Review SC IRD & Hold IRD-ERB	TM			5/29	<input type="checkbox"/>	6/25						
9	3.3.6	Define LV Acquisition Strategy	LSTO			6/26	<input type="checkbox"/>	7/23						
10	3.3.7	Hold Kick-off GOWG	LSIM			3/5								
11	3.3.8	LSP PRCB for LV Acquisition Strategy	LSTO			7/24	<input type="checkbox"/>	8/20						
12	3.3.9	Prepare Sole Source Justification	LSTO			8/21	<input type="checkbox"/>	9/17						
13	3.3.10	LV Selection	HQ			9/18	<input type="checkbox"/>	10/15						
14	3.3.11	Hold Competition (Review IRD) (LSTO)	LSTO			7/24	<input type="checkbox"/>	8/20						
15	3.3.12	LSP PRCB for LV Selection	LSTO			8/21	<input type="checkbox"/>	9/17						
16	3.3.13	Present Findings to Flight Planning Board	LSTO			9/18	<input type="checkbox"/>	10/15						
17	3.3.14	Develop LSSP	LSIM			3/6	<input type="checkbox"/>	4/2						
18	3.3.15	"Prepare Cost Estimate, Customized Payment Schedule (if required) and	PIM			3/6								
19	3.3.16	Generate Configuration Action Request (CAR)	PIM			3/9	<input type="checkbox"/>	4/3						
20	3.3.17	Safety Requirements Tailoring	SC			5/29	<input type="checkbox"/>	6/25						
21	3.3.18	Preliminary SC MSPSP	SC			6/26	<input type="checkbox"/>	7/23						
22	3.3.19	LV Orbital Debris Assessment (ODA) (LV & SC)	TM			6/26	<input type="checkbox"/>	7/23						
23	3.3.20	SC CDR	SC			7/23								
24	3.3.21	Prepare Mission Approval Plan	MM			5/1	<input type="checkbox"/>	5/28						
25	3.3.22	LSP Confirm Manifest Launch Date	LSP							11/13	<input type="checkbox"/>	12/10		
26	3.3.23	LSP PRCB for ATP	MM			5/29	<input type="checkbox"/>	6/25						
27	3.3.24	Hold FPB ATP	MM			6/26	<input type="checkbox"/>	7/23						
28	3.3.25	Confirm Manifest Launch Date	HQ							10/16	<input type="checkbox"/>	11/12		
29	3.3.26	Place Mission on Contract	PIM			7/24	<input type="checkbox"/>	8/20						
30	3.3.27	Review SC Preliminary MSPSP	SMA			7/24	<input type="checkbox"/>	8/20						
31	3.3.28	Review Press Release	LSTO							10/16	<input type="checkbox"/>	11/12		
32	3.3.29	Phase Close-Out	MM							2/23				

TM = Technical Management

HQ = NASA HQ & Mission Directorate

LD = Launch Director

LSP = LSP Mgmt

LSIM = Launch Site Integration Manager

LSTO = LSTO (Mini Source Board)

LV = Launch Vehicle Contractor

MM = Mission Manager

PIM = Program Integration Manager

SC = Spacecraft Project

SMA = Safety & Mission Assurance

BOSS AQUARIUS Schedule

LSP-F-330.02 Basic

Page 2 of 2

5/20/08

ID	WBS	Name	Resp.	2007		2008				2009				2010				Q1
				Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
26	4.3.23	Mission Support Analysis	TM										1/8	<input type="checkbox"/>	2/4			
27	4.3.24	Verify ICD	TM										2/5	<input type="checkbox"/>	3/4			
28	4.3.25	HAR/MSR equivalent	LV										12/11	<input type="checkbox"/>	1/7			
29	4.3.26	Develop LV/SC & Integrated LS Procedures	LV										1/8	<input type="checkbox"/>	2/4			
30	4.3.27	LV Components arrives at Launch Site	LV										2/5	<input type="checkbox"/>	3/4			
31	4.3.28	Publish Baseline LSSP	LSIM										10/16	<input type="checkbox"/>	11/12			
32	4.3.29	GOWG	LSIM										10/15	<input type="checkbox"/>				
33	4.3.30	Prepare PPF & services for GSE/SC arrival	LSIM										11/13	<input type="checkbox"/>	12/10			
34	4.3.31	Comm & Telemetry Reviews	LSIM										12/11	<input type="checkbox"/>	1/7			
35	4.3.32	Review S/C Final MSPSP	SMA										9/18	<input type="checkbox"/>	10/15			
36	4.3.33	GOR	LSIM										1/7	<input type="checkbox"/>				
37	4.3.34	Process Launch Delays as needed	PIM										10/16	<input type="checkbox"/>	11/12			
38	4.3.35	Track Milestone Payments	PIM										10/16	<input type="checkbox"/>	11/12			
39	4.3.36	Procure Deployable & Fixed Telemetry Assets	PIM										10/16	<input type="checkbox"/>	11/12			
40	4.3.37	Begin Access Badging & Training	LSIM										12/11	<input type="checkbox"/>	1/7			
41	4.3.38	"LV & MU Eng Review Process (ERBs,ERSs,Req Rev, Des Rev, Qual)"	TM										3/5	<input type="checkbox"/>	4/1			
42	4.3.39	Payload-LV Fitcheck	TM										4/2	<input type="checkbox"/>	4/29			
43	4.3.40	MMWG	MM										9/17	<input type="checkbox"/>				
44	4.3.41	Safety TMS PSWG	SMA										10/15	<input type="checkbox"/>				
45	4.3.42	S/C PreShip Review	SC										3/4	<input type="checkbox"/>				
46	4.3.43	S/C Ships	SC										3/5	<input type="checkbox"/>	4/1			
47	4.3.44	Phase Close-Out	MM										4/1	<input type="checkbox"/>				

TM = Technical Management

LSIM = Launch Site Integration Manager

PIM = Program Integration Manager

HQ = NASA HQ & Mission Directorate

LSTO = LSTO (Mini Source Board)

SC = Spacecraft Project

LD = Launch Director

LV = Launch Vehicle Contractor

SMA = Safety & Mission Assurance

LSP = LSP Mgmt

MM = Mission Manager



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Aquarius Mission Management

Dave Breedlove

LAUNCH SERVICES PROGRAM

Mission

Launch Date

Orbit Requirement

Launch Vehicle Class

Launch Period Window

PPF

Mass (kg)

PAD

Aquarius
2010/05/23
Sun Sync
Delta II
Commercial PPF
1675
SLC-2

AQUARIUS

ICD

There are no signed SCNs

May Jun Jul

0	0	0
---	---	---

There are no SCNs in Review

Observatory Status

Observatory Status

Schedule

Budget

Deliverables

Testing

ATLO

Instrument

May Jun Jul

G	G	G
G	G	G
Y	Y	Y
G	G	G
G	G	G
G	G	G
G	G	G

Launch Vehicle Status

Integrated Schedule

CDRLs (S/C & LSC)

Manifest/Range

Ground Stations

Deployables

P-3/OTTR

G	G	G
G	G	G
G	G	G
0	0	0
0	0	0
0	0	0

Mission Center:

Program:

PM

LVI

MM

IE

LSIM

PIM

MAM

MCE

MTE

JPL

ESSP

Amit Sen

Mike Davis

Dave Breedlove

Norman Beck, Jr.

Mark Mertz

Shaqueena Lewis

Michael Johnson

Robert McEntire

Nathan Wood

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Aquarius - Engineering

Norman Beck, Jr.

LAUNCH SERVICES PROGRAM

	May	Jun	Jul
Launch Vehicle	G	G	G
Payload Fairing	G	G	G
First Stage	G	G	G
Second Stage	G	G	G
Third Stage	0	0	N/A
Payload Attach Fitting	G	G	G
Other	G	G	G
Mission Specific	G	G	G
Certification	0	0	N/A
Mission Analysis	G	G	G
ERS/ERB	G	G	G
Launch PAD/GSE	G	G	G
Mission Unique IV&V	0	0	N/A

REQUIREMENT VERIFICATION STATUS	
NUMBER OF REQUIREMENTS	0
VERIFIED TO DATE	0

LAUNCH PAD / GSE MODS (IF APPLICABLE)
Launch PAD sustainment support into 2010

MISSION UNIQUE STUDIES (IF APPLICABLE)
There are none.

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Aquarius - Mission ERB Status

Norman Beck, Jr.

LAUNCH SERVICES PROGRAM

R/Y/G	ERS #	TITLE	ERB Req?		Board Held?			Closure		
			Y	N	Y	N	N/A	AI	ENG.	OCE
0	08-55	Aquarius ICD Approval	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	07-05	Aquarius TPAF	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Aquarius - Vehicle ERB Status

Norman Beck, Jr.

LAUNCH SERVICES PROGRAM

There are no Vehicle ERBs for this mission.

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Aquarius - Launch Site

Mark Mertz

LAUNCH SERVICES PROGRAM

	May	Jun	Jul
LSSP	G	G	G

LSSP	Planned	Released
Preliminary	11/2008	
Baseline	9/2009	

	May	Jun	Jul
CUSTOMER INPUTS	G	G	G

DELIVERABLES	May	Jun	Jul
Security and Badging	G	G	G
Training and Personnel Cert	G	G	G
Contingency Plans	G	G	G
Safety LSIM	G	G	G
Radiation Control	G	G	G
Operational Plans	G	G	G

UNIQUE REQUIREMENTS

	May	Jun	Jul
LAUNCH SITE UNIQUE	G	G	G
Propellant Services	G	G	G
PPF	G	G	G
Spacecraft OPS	G	G	G

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Aquarius Budget Breakdown

Shaqueena Lewis

LAUNCH SERVICES PROGRAM

The launch service budget includes:

* **Mission Uniques**

- Requirements necessary to customize basic vehicle hardware to meet unique s/c driven requirements.
- Contains some flexibility except when technical risk is affected. Spacecraft requirements are the cost driver.

* **Integrated Services**

- LSP contractor support service (ELVIS, CAPPS, JBOSC, KICs, etc).
- USAF range costs attributable to the mission

* **Payload Processing Facility**

- Government facility: spacecraft customers are required to be processed in a government facility if the mission is planetary or has nuclear requirements
- Commercial facility: all other missions have been directed to process in a commercial facility;
- Contains some budget flexibility. Additional spacecraft cleanliness requirements or hazardous requirements may increase PPF costs.

* **Telemetry**

- Assets required to meet minimum launch vehicle telemetry requirements.
- Includes fixed and deployable ground stations, instrumented aircraft, and ocean assets.
- Limited flexibility requirements are often set late in the integration cycle.

* **Fly Out**

- Costs that each mission in the 19-Pack must incur.
- Long lead material procurement to mitigate risks due to gaps in production and supplier orders.
- Post-production support for labor skill retention, procure, manufacture, store and maintain under configuration control, mission critical spare parts.
- Pad Sustainability costs for SLC-2 and SLC-17.
- No flexibility-contract costs

* **Nuclear**

- RTG/RHU processing
- RTG/RHU databooks and approval
- Limited flexibility

* **Reimbursable**

- Reimbursable FC for transportation, labor, and CMO.

* **Mission Flexibility**

- Portion of the mission budget available for funding additional task assignments, non-standard services or meeting unexpected requirements.

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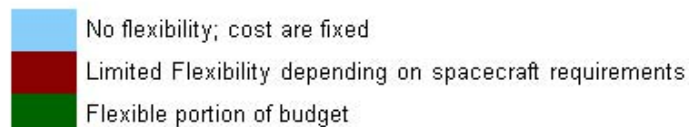
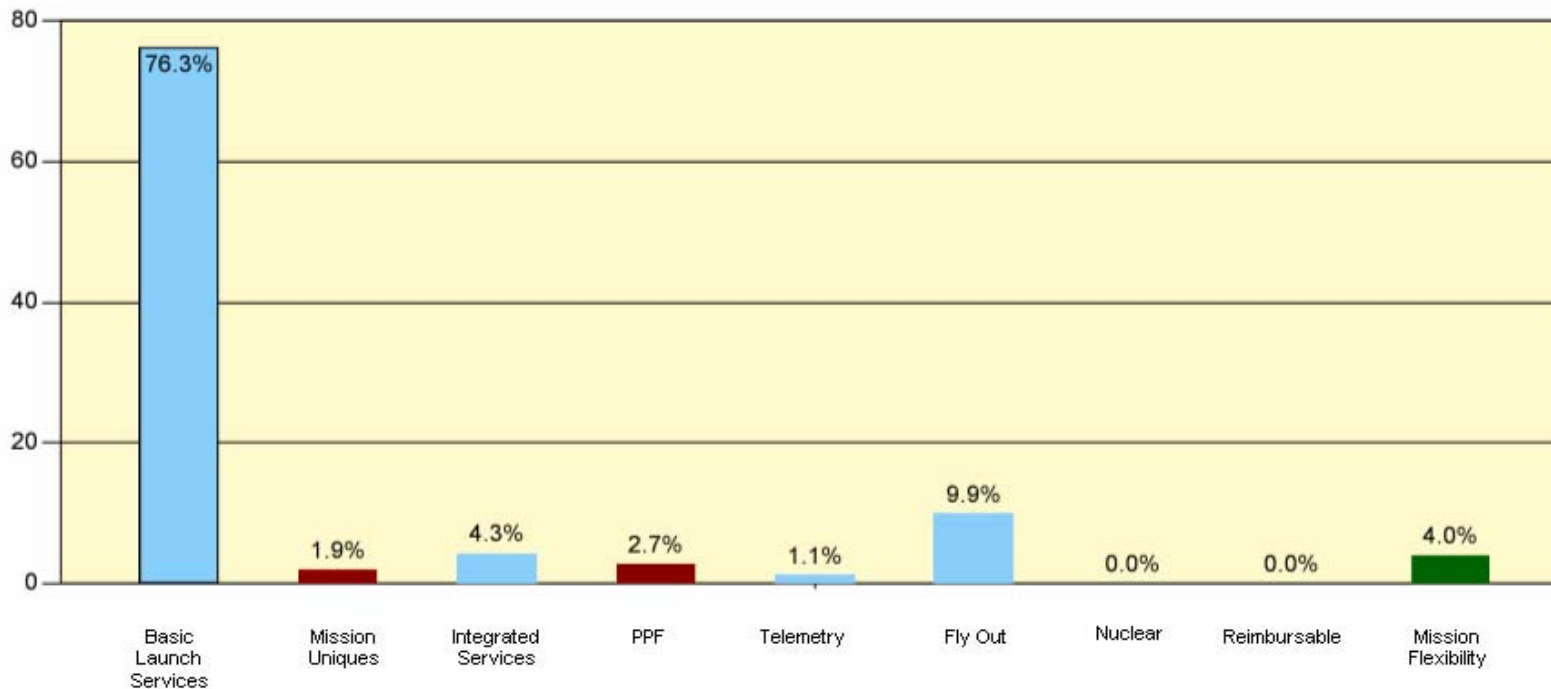
Launch Services Budget Breakdown

Aquarius Mission

Shaqueena Lewis

LAUNCH SERVICES PROGRAM

% of Total Launch Service Cost - 7 / 2008



Notes:

Mission Flexibility remains at 4.0%.

Budget does not contain post-production support or pad maintenance for 2010 launch date. These costs are currently being developed by LSP.

Project is currently in early stages; requirements still being developed.

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Aquarius - Business

Shaqueena Lewis

LAUNCH SERVICES PROGRAM

Budget

Contracts

May	Jun	Jul
Y	Y	Y
G	G	G

Milestone	Date
Milestone 1	11/23/2007
Milestone 1A	02/23/2008
Milestone 2	05/23/2008
Milestone 3	08/23/2008
Milestone 4	11/23/2008
Milestone 5	02/23/2009
Milestone 6	05/23/2009
Milestone 7	08/23/2009
Milestone 8	11/23/2009
Milestone: 9	02/23/2010
Milestone: 10	05/23/2010

<input type="checkbox"/>	Open Milestone Payment
<input type="checkbox"/>	Paid Milestone

Contract Status		
Launch Services		
Contract Mod	Number	Description
	219	NSS 20.2.3 Early Trajectory Analysis
	201	NSS 20.3.3 Quick Turnaround CLA
	311	NSS 20.3.4 Final Design Load Cycle
	313	Aquarius ATP
	198	NSS 32.1 VAFB Launch Site Maintenance and NSS 33.1 Post Production Support
	240	NSS 32.1 VAFB Launch Site O&M and NSS 33.1 Post Production Support
	337	NSS 3.2.1 6306 Payload Adapter

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Contract Mod (LD)	Number	Description		
	076	Delay from 9/07 to NET 3/1/08		
	136	Delay from 3/08 to 9/08		
	235	Delay from 9/30/08 to 3/23/09		
	264	Delay from 3/23/09 to 7/14/2009		
Task Assignments	Number	Description	Completion Date	Invoice Paid Date
	NLSB 178	Range Introduction meeting support	12/16/2005	01/06/2006
	NLSB 180	Accelerated Time Histories	03/10/2006	04/07/2006
	NLSB 197	Pre-ATP Support (export docs, travel)	12/03/2007	
	NLSB 208	Pre-ATP Shipping	01/31/2008	02/29/2008
	NLSB 314	Engineering Model Test Support	07/31/2008	
There are no PPF Contract Mods				
Contract Mod (Other)	Number	Description		
	NLSB 125	NSS 30.1 FY05 Flyout Costs		
	Issues			
Y	First Delta II launch in 2010. Launch Pad maintenance cost and Post-production support costs are currently not fully known. Tech Evals in work. Working with ULA and USAF; hope to finalize in August.			
G	Aquarius mission has 120 days of grace remaining and the next notification point for a potential launch delay is 05/22/2009 for either Government or Contractor (L-12 mo + 1 Day).			
G	Invoice for milestone payment 2 has been received; invoice signed on 06/06/2008.			



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Center

Aquarius - Safety and Mission Assurance

Michael Johnson

LAUNCH SERVICES PROGRAM

Assurance Verification Areas	Status		Evidence of Completion			
	Complete	In Work		May	Jun	Jul
Quality				G	G	Y
Software / Hardware Problems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Continuing to monitor ULA-Boeing's response to Quality Management System risk	G	G	Y
Alerts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues at this time	G	G	G
Audits/Inspections/Surveillances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues at this time	G	G	G
Limited Life Items	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues at this time	G	G	G
Reliability				G	G	G
FMEA/Fishbones/Equivalent	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues at this time	G	G	G
Reliability Assessments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues at this time	G	G	G
Safety				G	G	G
Requirements Definitions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues at this time	G	G	G
Range Safety & Mission Flight Rules	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues at this time	G	G	G
Licenses/Use Authorizations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues at this time	G	G	G
Safety Documentation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues at this time	G	G	G
Non-compliances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues at this time	G	G	G
Contingency Planning	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues at this time	G	G	G
Mission Assurance				G	G	Y
Lessons Learned	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues at this time	G	G	G
First Flight/Mission Unique items	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues at this time	G	G	G
Test/Qualification/Certification	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues at this time	G	G	G
Mission Assurance Assessments	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Tracking Alenia tank issues	G	G	Y
Risk Management	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues at this time	G	G	G

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Aquarius Comm & Telemetry

Robert McEntire and Nathan Wood

LAUNCH SERVICES PROGRAM

Communications

Voice Comm
Data Comm
Networks
Video Comm
Timing
RF Comm
LSSP Comm Annex

May	Jun	Jul
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

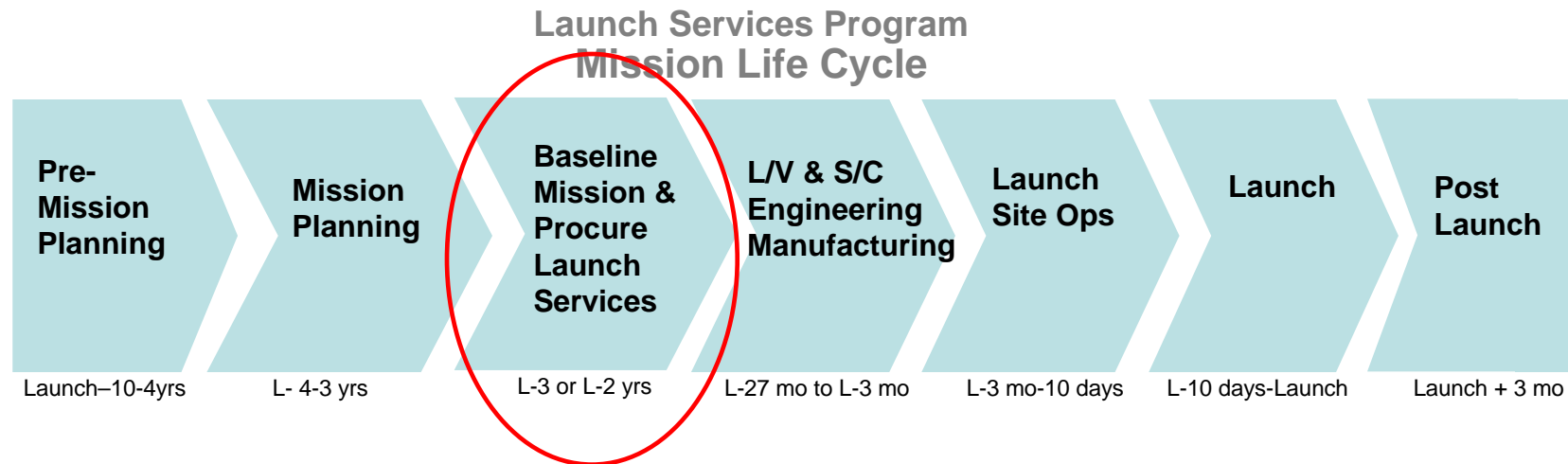
Telemetry

Decommuration Tables
Data Integrity Test
Software Lockdown
Software Inventory
Console Configuration
Console Checkout

May	Jun	Jul
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

GRAIL

Launch Date: 9/01/10





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GRAIL Project Summary

LAUNCH SERVICES PROGRAM

Mission	GRAIL
Launch Date	2011/9/01
Launch Vehicle	Delta II
Launch Period Window	
PPF	ASO-KSC

OVERALL MISSION

May	Jun	Jul
0	0	G

MISSION MANAGEMENT

Observatory Status
Manifest/Range
Integrated Schedule
ICD
CDRLs (S/C & LSC)

May	Jun	Jul
0	0	G
0	0	G
0	0	G
0	0	G
0	0	G

LAUNCH SITE

LSSP
Customer Inputs
PPF
Launch Site Unique
Spacecraft OPS

May	Jun	Jul
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

SAFETY & MISSION ASSURANCE

Mission Assurance
Safety
Quality
Reliability

May	Jun	Jul
0	0	G
0	0	G
0	0	G
0	0	G

ENGINEERING

Launch Vehicle
Mission Specific
Certification
Mission Analysis
ERS/ERB
Launch PAD/GSE
Mission Unique IV&V

0	0	G
0	0	G
0	0	N/A
0	0	G
0	0	G
0	0	G
0	0	G

COMM & TELEMETRY

Communications
Telemetry

0	0	0
0	0	0

BUSINESS

Budget
Contracts

0	0	G
0	0	G

LEGEND

Proceeding on Plan
Area of Concern
Significant Problem
Not Evaluated
Not Applicable

G
Y
R
0
N/A

DOWNRANGE TELEMETRY

Ground Stations
Deployables
P-3/OTTR

0	0	G
0	0	0
0	0	0

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GRAIL - Open/Accepted Risks

LAUNCH SERVICES PROGRAM

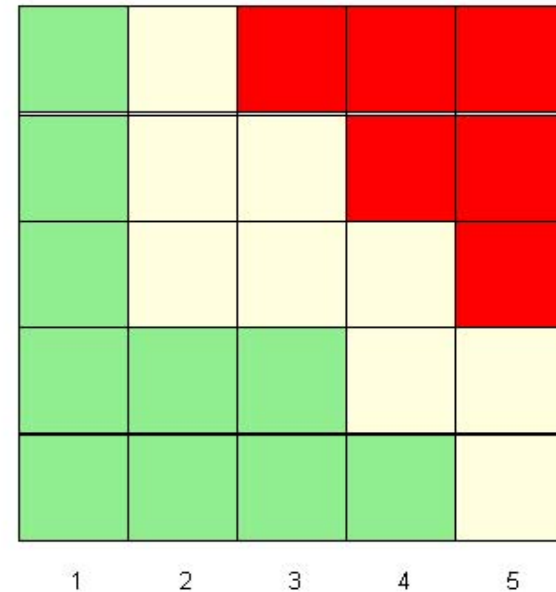
There are no Risks.

P
R
C
B

C
F

C
C
C
U
R
R
E
N
C
E

5
91-
100%
4
51-90%
3
11-50%
2
6-
10%
1
1-5%



IMPACT

July 17, 2008

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GRAIL - Actions / Issues / Concerns

LAUNCH SERVICES PROGRAM

There are no Actions.

Mission Summary Map	G/Y/R	ISSUES / CONCERNS	WI/ERS/Risk/ Problem	Open Date	Due Date
Mission Management	G	Currently the last planned Delta II launch. There are concerns with personnel availability and spare hardware.	WI	07/14/2008	06/30/2009

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GRAIL - Significant Events

LAUNCH SERVICES PROGRAM

Accomplished	
ATP	04/25/2008
received preliminary IRD	06/01/2008-06/01/2008

Planned	
Preliminary Design Review	11/03/2008- 11/06/2008

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GRAIL Mission Management

Bruce Reid

LAUNCH SERVICES PROGRAM

Mission

Launch Date

Orbit Requirement

Launch Vehicle Class

Launch Period Window

PPF

Mass (kg)

PAD



GRAIL
2011/9/01
Delta II
ASO-KSC
678
SLC-17 B

Observatory Status

Observatory Status

Schedule

Budget

Deliverables

Testing

ATLO

Instrument

May	Jun	Jul
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

Mission Center:

Program:

PM

LVI

MM

IE

LSIM

PIM

MAM

MCE

MTE

KSC
Discovery
David Lehman
Mike Gallagher
Bruce Reid
Sarah LeValley
Mark Shugg
Randy Mizelle
Bob Henry

Launch Vehicle Status

Integrated Schedule

CDRLs (S/C & LSC)

Manifest/Range

Ground Stations

Deployables

P-3/OTTR

May	Jun	Jul
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

ICD

May Jun Jul

0	0	0
---	---	---

There are no signed SCNs

There are no SCNs in Review

July 17, 2008

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GRAIL - Engineering

Sarah LeValley

LAUNCH SERVICES PROGRAM

	May	Jun	Jul
Launch Vehicle	0	0	G
Payload Fairing	0	0	G
First Stage	0	0	G
Second Stage	0	0	G
Third Stage	0	0	G
Payload Attach Fitting	0	0	G
Other	0	0	N/A
Mission Specific	0	0	G
Certification	0	0	N/A
Mission Analysis	0	0	G
ERS/ERB	0	0	G
Launch PAD/GSE	0	0	G
Mission Unique IV&V	0	0	G

REQUIREMENT VERIFICATION STATUS	
NUMBER OF REQUIREMENTS	0
VERIFIED TO DATE	0

LAUNCH PAD / GSE MODS (IF APPLICABLE)
There are none.

MISSION UNIQUE STUDIES (IF APPLICABLE)
There are none.

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GRAIL - Mission ERB Status

Sarah LeValley

LAUNCH SERVICES PROGRAM

There are no Mission ERBs for this mission.

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GRAIL - Vehicle ERB Status

Sarah LeValley

LAUNCH SERVICES PROGRAM

There are no Vehicle ERBs for this mission.

July 17, 2008

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GRAIL - Launch Site

Mark Shugg

LAUNCH SERVICES PROGRAM

LSSP

May	Jun	Jul
0	0	0

LSSP	Planned	Released
Preliminary		
Baseline		

CUSTOMER INPUTS

May	Jun	Jul
0	0	0

DELIVERABLES

Security and Badging
Training and Personnel Cert
Contingency Plans
Safety LSIM
Radiation Control
Operational Plans

May	Jun	Jul
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

UNIQUE REQUIREMENTS

LAUNCH SITE UNIQUE

May	Jun	Jul
0	0	0

PPF

0	0	0
---	---	---

Spacecraft OPS

0	0	0
---	---	---

July 17, 2008

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GRAIL Budget Breakdown

Randy Mizelle

LAUNCH SERVICES PROGRAM

The launch service budget includes:

* **Launch Services**

- Standard launch Vehicle Services provided by this contract. This line item is firm fixed price and has no flexibility.

* **Mission Uniques**

- Requirements necessary to customize basic vehicle hardware to meet unique s/c driven requirements.
- Other services directly attributable to the mission.
- Contains some flexibility except when technical risk is affected. Spacecraft requirements are the cost driver.

* **Integrated Services**

- LSP contractor support service (ELVIS, CAPPs, JBOSC, KICs, etc).
- USAF range costs attributable to the mission
- Limited flexibility

* **Payload Processing Facility**

- Government facility: spacecraft customers are required to be processed in a government facility if the mission is planetary or has nuclear requirements
- Commercial facility: all other missions have been directed to process in a commercial facility;
- Contains some budget flexibility. Additional spacecraft cleanliness requirements or hazardous requirements may increase PPF costs.

* **Telemetry**

- Assets required to meet minimum launch vehicle telemetry requirements.
- Includes fixed and deployable ground stations, instrumented aircraft, and ocean assets.
- Limited flexibility requirements are often set late in the integration cycle.

* **Fly Out**

- Costs that each mission in the 19-Pack must incur.
- Long lead material procurement to mitigate risks due to gaps in production and supplier orders.
- Post-production support for labor skill retention, procure, manufacture, store and maintain under configuration control, mission critical spare parts.
- Pad Sustainability costs for SLC-2 and SLC-17.
- No flexibility-contract costs

* **Nuclear**

- RTG/RHU processing
- RTG/RHU databooks and approval
- Limited flexibility

* **Reimbursable**

- Reimbursable FC for transportation, labor, and CMO.

* **Mission Flexibility**

- Portion of the mission budget available for funding additional task assignments, non-standard services or meeting unexpected requirements.

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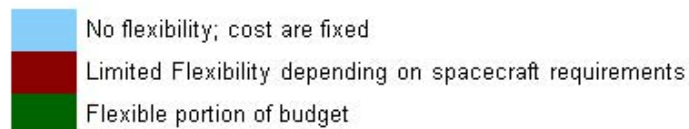
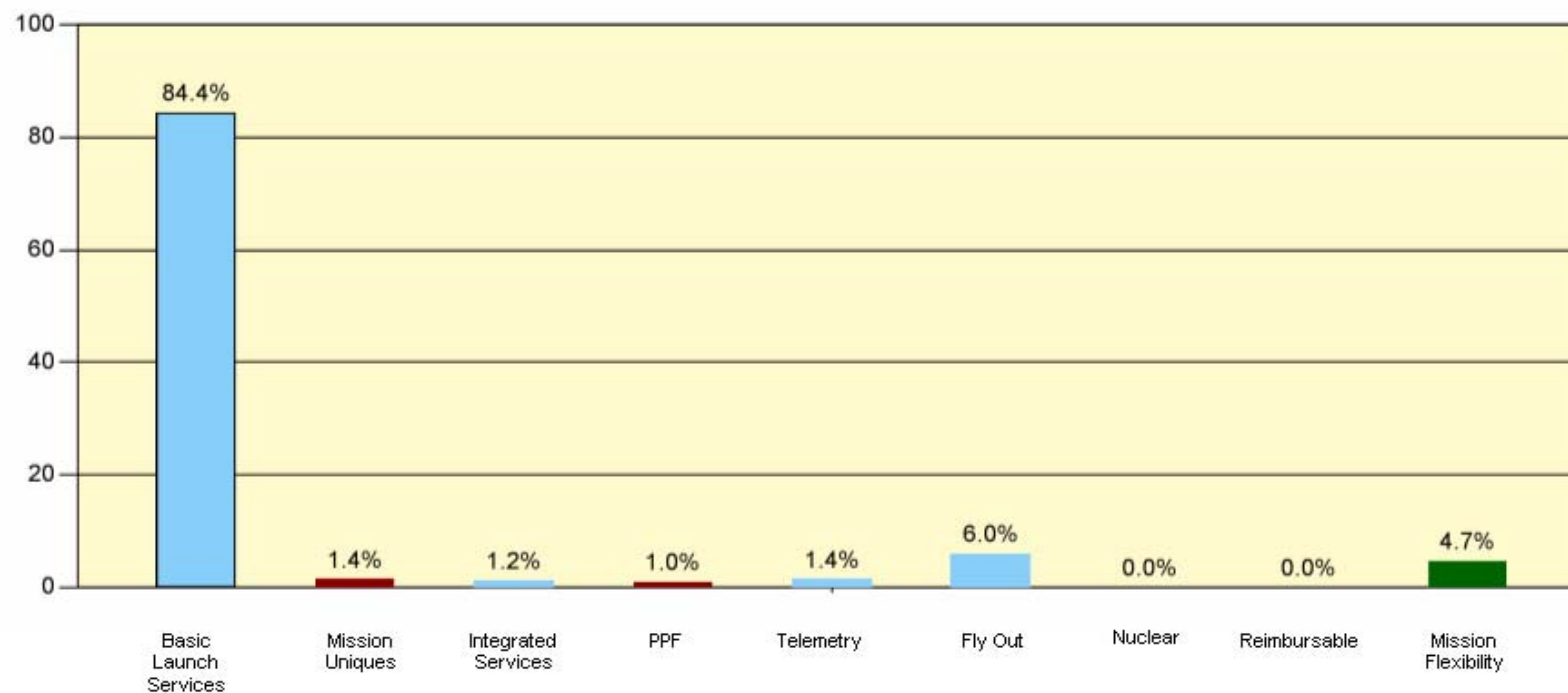
Launch Services Budget Breakdown

GRAIL Mission

Randy Mizelle

LAUNCH SERVICES PROGRAM

% of Total Launch Service Cost - 7 / 2008



Notes:

July 17, 2008

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GRAIL - Business

Randy Mizelle

LAUNCH SERVICES PROGRAM

Budget

Contracts

May	Jun	Jul
0	0	G
0	0	G

Milestone	Date
Milestone 1	06/03/2008
Milestone 2	07/02/2008
Milestone 3	09/15/2008
Milestone 4	12/15/2008
Milestone 5	03/15/2009
Milestone 6	06/15/2009
Milestone 7	09/15/2009
Milestone 8	12/15/2009
Milestone 9	03/15/2010
Milestone 10	06/15/2010
Milestone 11	09/15/2010
Milestone 12	12/15/2010
Milestone 13	03/15/2011
Milestone 14	06/15/2011
Milestone 15	09/08/2011

<input type="checkbox"/>	Open Milestone Payment
<input type="checkbox"/>	Paid Milestone

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Contract Status		
Launch Services		
Contract Mod	Number	Description
	0333	Mission Authorization to Proceed (ATP)
	0333	Basic Launch Service and Standard Mission Integration
	0333	NSS 1.1 Heavy Vehicle Upgrade
	0333	NSS 31.2 CCAFS Launch Site Maintenance
	0333	NSS 33.1 Post Production Support - Labor
	0333	Mission Unique Service - 42 Month Integration
	0333	NSS 30.2 Long Lead Material Liquidation
There are no LD Contract Mods		
There are no Task Assignments		
There are no PPF Contract Mods		
There are no Other Contract Mods		
There are no Issues.		



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Center

GRAIL - Safety and Mission Assurance

Bob Henry

LAUNCH SERVICES PROGRAM

Assurance Verification Areas	Status		Evidence of Completion	May	Jun	Jul
	Complete	In Work				
Quality				0	0	G
Software / Hardware Problems	<input type="checkbox"/>	<input checked="" type="checkbox"/>		0	0	0
Alerts	<input type="checkbox"/>	<input checked="" type="checkbox"/>		0	0	0
Audits/Inspections/Surveillances	<input type="checkbox"/>	<input checked="" type="checkbox"/>		0	0	0
Limited Life Items	<input type="checkbox"/>	<input checked="" type="checkbox"/>		0	0	0
Reliability				0	0	G
FMEA/Fishbones/Equivalent	<input type="checkbox"/>	<input checked="" type="checkbox"/>		0	0	0
Reliability Assessments	<input type="checkbox"/>	<input checked="" type="checkbox"/>		0	0	0
Safety				0	0	G
Requirements Definitions	<input type="checkbox"/>	<input checked="" type="checkbox"/>		0	0	0
Range Safety & Mission Flight Rules	<input type="checkbox"/>	<input checked="" type="checkbox"/>		0	0	0
Licenses/Use Authorizations	<input type="checkbox"/>	<input checked="" type="checkbox"/>		0	0	0
Safety Documentation	<input type="checkbox"/>	<input checked="" type="checkbox"/>		0	0	0
Non-compliances	<input type="checkbox"/>	<input checked="" type="checkbox"/>		0	0	0
Contingency Planning	<input type="checkbox"/>	<input checked="" type="checkbox"/>		0	0	0
Mission Assurance				0	0	G
Lessons Learned	<input type="checkbox"/>	<input checked="" type="checkbox"/>		0	0	0
First Flight/Mission Unique Items	<input type="checkbox"/>	<input checked="" type="checkbox"/>		0	0	0
Test/Qualification/Certification	<input type="checkbox"/>	<input checked="" type="checkbox"/>		0	0	0
Mission Assurance Assessments	<input type="checkbox"/>	<input checked="" type="checkbox"/>		0	0	0
Risk Management	<input type="checkbox"/>	<input checked="" type="checkbox"/>		0	0	0

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GRAIL Comm & Telemetry

LAUNCH SERVICES PROGRAM

Communications

Voice Comm
Data Comm
Networks
Video Comm
Timing
RF Comm
LSSP Comm Annex

May	Jun	Jul
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

Telemetry

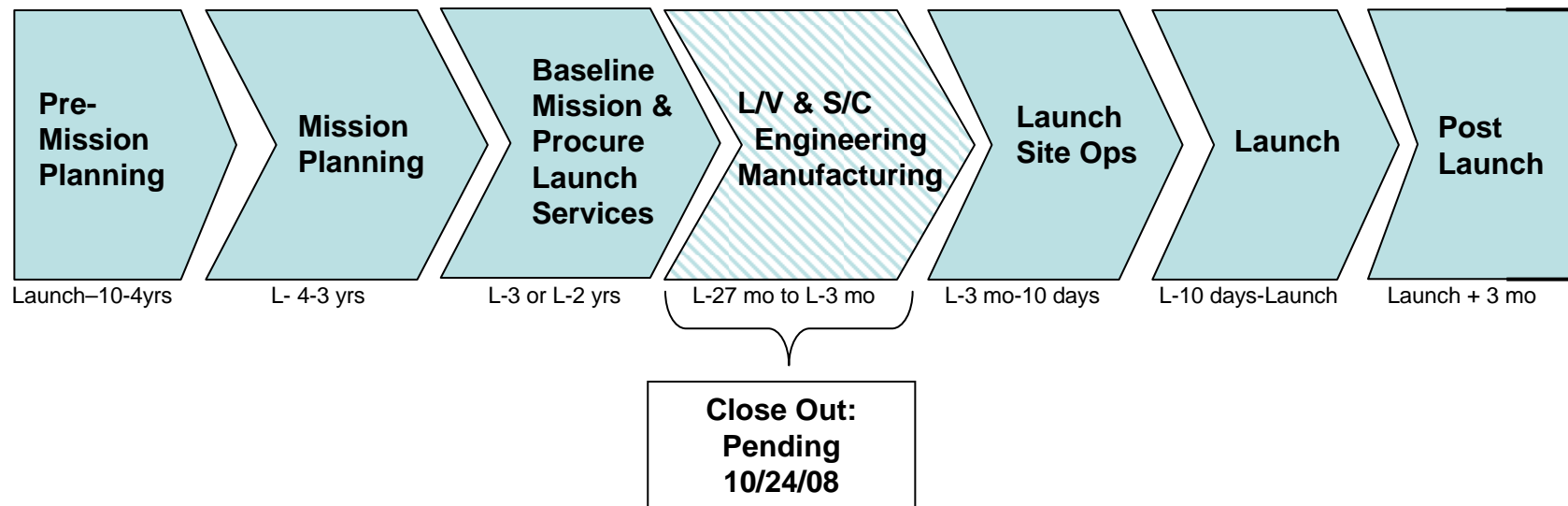
Decommutation Tables
Data Integrity Test
Software Lockdown
Software Inventory
Console Configuration
Console Checkout

May	Jun	Jul
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

OCO

Launch Date: 1/15/09

Launch Services Program Mission Life Cycle





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OCO Project Summary

LAUNCH SERVICES PROGRAM

Mission	OCO
Launch Date	2009/1/15
Launch Vehicle	Taurus
Launch Period Window	TBD
PPF	ASO-VAFB

	May	Jun	Jul
OVERALL MISSION	Y	Y	Y

MISSION MANAGEMENT

	May	Jun	Jul
Observatory Status	G	G	G
Manifest/Range	G	G	G
Integrated Schedule	G	G	G
ICD	G	G	G
CDRLs (S/C & LSC)	G	G	G

LAUNCH SITE

	May	Jun	Jul
LSSP	G	G	G
Customer Inputs	G	Y	G
PPF	G	G	G
Launch Site Unique	G	G	G
Spacecraft OPS	G	G	G

SAFETY & MISSION ASSURANCE

	May	Jun	Jul
Mission Assurance	G	G	G
Safety	G	G	G
Quality	Y	Y	Y
Reliability	G	G	G

ENGINEERING

	May	Jun	Jul
Launch Vehicle	G	G	G
Mission Specific	G	G	G
Certification	R	Y	Y
Mission Analysis	G	G	G
ERS/ERB	G	G	G
Launch PAD/GSE	G	G	G
Mission Unique IV&V	N/A	N/A	N/A

COMM & TELEMETRY

	May	Jun	Jul
Communications	G	G	G
Telemetry	D	D	D

BUSINESS

	May	Jun	Jul
Budget	G	G	G
Contracts	G	G	G

LEGEND

Proceeding on Plan
 Area of Concern
 Significant Problem
 Not Evaluated
 Not Applicable

G
Y
R
D
N/A

DOWNRANGE TELEMETRY

	May	Jun	Jul
Ground Stations	D	D	D
Deployables	D	D	D
P-3/OTTR	D	D	D

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OCO - Open/Accepted Risks

LAUNCH SERVICES PROGRAM

		Condition
RYG Trend	RiskID	Consequence
G	M0264	The OCO and Glory payload fairing (PLF) production schedules are ahead of the Ballast Ring Mission Unique design reviews. The outcome of the ballast ring design process impacts the location of the PLF doors which are described in the Mechanical ICDs.
		If the Ballast Ring design changes as an outcome of the design review process the OCO and Glory PLF cutouts (as defined in the MICD change) may not be located in the correct position to support S/C access after PLF installation. Or, if the MICD is not approved by NASA, cost and schedule of PLF manufacturing may be impacted. Status: AW successful MUSAR to close this RISK.
O	P0022	NASA Atlas and Taurus missions not spaced properly. definite shifts in NASA FPB manifest dates for missions affected.
G	M0275	The planned OCO Softride qualification testing levels envelope the expected flight vibration levels but not the higher S/C system vibration test levels.
		OCO spacecraft vibe may be delayed until OCO soffride can be qualified to the higher levels. Status: Softride is now qualified for test and flight use-- in closure.
G	M0281	Contingency Fuel Off-load; If an OCO S/C N2H4 fuel tank leak were to occur, complete off-load of the fuel cannot be done while the S/C is horizontal or while stacked on the launch vehicle.
		Launch delay due to resulting defueling plan execution and subsequent leak repair. Status: AW PSWG and Range Safety to approve Plan and waive Range Safety requirement.

P
R
C
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C
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U
R
E
N
C
E

5
91-100%
4
51-90%
3
11-50%
2
6-10%
1
1-5%



1 2 3 4 5

IMPACT

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OCO - Actions / Issues / Concerns

LAUNCH SERVICES PROGRAM

There are no Actions.

Mission Summary Map	G/Y/R	ISSUES / CONCERNS	WI/ERS/Risk/ Problem	Open Date	Due Date
Engineering	G	S/C Elec Umb reqmts exceed Taurus umb capability at pad. LSG developing mod to umbilicals. Received prelim design from Orbital, in eng assessment. This item is included in the MUSLDR scheduled for 7/30/08.	ERS-06-328	05/03/2006	07/31/2008
Engineering	G	Manufacturing process vulnerability in which Pacific Scientific detonators that have been reworked may have been inadvertently returned to production without the correct load of explosive material. Risk accepted for AIM. OCO mission assessments of this risk item is ongoing as WI. Fleet risk V0048 closed 3/23/07. Final OCO resolution requires flight specific parts list.	WI	3/23/07	9/15/08
Engineering	G	The currently planned OCO Softride isolator qualification testing envelopes the predicted OCO flight levels, but does not envelope the proposed JPL S/C system vibration test levels. The OCO S/C system vibration test may be delayed until the Softride isolator can be shown qualified to the higher JPL S/C test levels. (OCO S/C system vibration test planned for April 08). 5/8/08 JBM, Testing complete and passed. Risk is in closure.	RISK M0275	1/11/08	06/30/2008
Engineering	G	Certification of Taurus XL launch vehicle is proceeding in parallel with OCO mission development. New risk being written, Vxxxx. Cert completion date projected as 11/23/08 for 12/15/08 launch. JBM 6/6/08 Launch slipped one month to 1/15/09.	Risk Vxxxx	2/14/08	12/15/08
Engineering	G	LSP chief Engineers Office directed a comprehensive mission peculiar review for all MU items as a group, not individually. Draft SOW nearly complete. Will add ERS when SOW proposal is approved (currently R&R under ERS 07-190 MUCDR). (7/13/08, J. Hoffman) ERS 08-150 opened for the MUSLDR scheduled for 7/30 & 7/31 at Dulles.	ERS 07-190	3/5/08	07/31/2008

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Mission Summary Map	G/Y/R	ISSUES / CONCERNS	WI/ERS/Risk/ Problem	Open Date	Due Date
Engineering	G	Observatory vibe testing ending in June with little margin to update FEM for 25 July 08 need date to start VLC. (7/13/08, J. Hoffman) S/C vibe testing complete. Updated FEM expected on 7/18.	WI	04/16/2008	7/25/08/
Engineering	G	For an OCO s/c hydrazine leak, complete offload of the fuel cannot be done while the S/C is in the horizontal position (integration tent) or stacked on the Taurus launch vehicle. (7/13/08, J. Hoffman) In work by PSWG and Range Safety evaluating Plan.	Risk M0281	5/9/08	9/7/08



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OCO - Significant Events

LAUNCH SERVICES PROGRAM

Accomplished	
PCLA	1/23/07
Bus CDR	02/15/2006-02/16/2006
MICD released	01/11/2007
Mission CDR	08/21/2006-08/24/2006
EICD released	01/23/2007
TFA	01/25/2007
Mission ICD released	04/12/2007
T8/T9 Ballast Ring MUCDR	1/31/08
PMA	9/20/07
GOWG at VAFB	02/05/2008-02/07/2008
Softride Isolator CDR	12/11/2007
Softride Isolator CDR/ERB Reconvene	3/14/2008-03/14/2008
OCO PPF awarded	01/07/2008
ITA	8/9/07
Sep Analysis	8/7/07
Comprehensive Mission Unique Review, SOW submitted to LSG.	03/26/2008-06/13/2008
Mission ICD Update, Rev A	4/4/08
MICD Update, Rev A	4/1/2008
EICD Update, Rev A	2/26/08
Fit Check and Shock Test	06/13/2008-06/15/2008

Planned	
T8/T9 MUSAR	8/28/08
CLA	9/3/08
FMA	9/3/08
RF Link Analysis	10/14/08
Flight Controls Analysis	10/14/08
OCO Systems Level Design Review	07/30/2008-07/31/2008
OCO Ballast ring MUSAR	08/25/2008-08/25/2008

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BOSS OCO Schedule

LSP-F-330.02 Basic

Page 1 of 1

7/16/08

ID	WBS	Name	Resp.	2007	2008												2009		
				Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1		BOSS OCO Schedule																	
2		LV & SC Engineering & Manufacturing Phase (~L-27 months to ~L-3 months)																	
3	4.3.7	LV Mfg	LV												8/20				
4	4.3.27	LV Components arrives at Launch Site	LV						5/16			7/3							
5	4.3.28	Publish Baseline LSSP	LSIM								7/4								
6	4.3.29	GOWG	LSIM						5/7					9/15	△	LOWG			
7	4.3.30	Prepare PPF & services for GSE/SC arrival	LSIM														10/14		
8	4.3.31	Comm & Telemetry Reviews	LSIM																
9	4.3.32	Review S/C Final MSPSP	SMA							6/16			7/15						
10	4.3.33	GOR	LSIM													10/23	△		
11	4.3.34	Process Launch Delays as needed	PIM																
12	4.3.35	Track Milestone Payments	PIM																
13	4.3.36	Procure Deployable & Fixed Telemetry Assets	PIM																
14	4.3.37	Begin Access Badging & Training	LSIM											9/1			9/26		
15	4.3.38	"LV & MU Eng Review Process (ERBs,ERSs,Req Rev, Des Rev, Qual)"	TM																
16	4.3.39	Payload-LV Fitchek	TM																
17	4.3.40	MIWG	MM													10/18	△		
18	4.3.41	Safety TIMS PSWG	SMA													10/18	△		
19	4.3.42	S/C PreShip Review	SC													10/10	△		
20	4.3.43	S/C Ships	SC													10/15	□	10/24	
21	4.3.44	Phase Close-Out	MM													10/24	△		

TM = Technical Management

LSIM = Launch Site Integration Manager

PIM = Program Integration Manager

HQ = NASA HQ & Mission Directorate

LSTO = LSTO (Mini Source Board)

SC = Spacecraft Project

LD = Launch Director

LV = Launch Vehicle Contractor

SMA = Safety & Mission Assurance

LSP = LSP Mgmt

MM = Mission Manager



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OCO Mission Management

Dave Breedlove

LAUNCH SERVICES PROGRAM

Mission

Launch Date

Orbit Requirement

Launch Vehicle Class

Launch Period Window

PPF

Mass (kg)

PAD

OCO
2009/1/15
705 km / 98.2 deg incl
Taurus
TBD
ASO-VAFB
444 kg (TB
567E

Observatory Status

Observatory Status

Schedule

Budget

Deliverables

Testing

ATLO

Instrument

May	Jun	Jul
G	G	G
G	G	G
G	G	G
G	G	G
G	G	G
G	G	G
G	G	G

Mission Center:

Program:

PM

LVI

MM

IE

LSIM

PIM

MAM

MCE

MTE

JPL
ESSP
Tom Livermore
Mike Davis
Dave Breedlove
Jim Hoffman
Julie Schneringer
Ken Carr
Laura McDaniel
Ralph Mikulas
Nathan Wood



ICD

May	Jun	Jul
G	G	G

Launch Vehicle Status

Integrated Schedule

CDRLs (S/C & LSC)

Manifest/Range

Ground Stations

Deployables

P-3/OTTR

G	G	G
G	G	G
G	G	G
0	0	0
0	0	0
0	0	0

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SIGNED SCNS:		SCNS IN REVIEW	
SCN #	DATE SIGNED	SCN #	DATE SIGNED
ICP-01, EICD	02/13/2007	ICP-12, Mission ICD	
ICP-02, EICD	02/13/2007		
ICP-003, MICD	08/14/2007		
ICP-001, MICD	9/10/07		
ICP-002, MICD	8/28/07		
ICP-03, EICD	1/29/08		
ICP-4, MICD	1/29/08		
ICP-13, Mission ICD	6/4/08		
ICP-005, MICD	6/4/08		
ICP-04, EICD	6/4/08		

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OCO - Engineering

Jim Hoffman

LAUNCH SERVICES PROGRAM

	May	Jun	Jul
Launch Vehicle	G	G	G
Payload Fairing	G	G	G
First Stage	G	G	G
Second Stage	G	G	G
Third Stage	G	G	G
Payload Attach Fitting	G	G	G
Other	G	G	G
Mission Specific	G	G	G
Certification	R	Y	Y
Mission Analysis	G	G	G
ERS/ERB	G	G	G
Launch PAD/GSE	G	G	G
Mission Unique IV&V	N/A	N/A	N/A

REQUIREMENT VERIFICATION STATUS	
NUMBER OF REQUIREMENTS	181
VERIFIED TO DATE	32

LAUNCH PAD / GSE MODS (IF APPLICABLE)
Umbilical Harness Mod
GSE Payload Fairing Doors

MISSION UNIQUE STUDIES (IF APPLICABLE)
There are none.

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OCO - Mission ERB Status

Jim Hoffman

LAUNCH SERVICES PROGRAM

R/Y/G	ERS #	TITLE	ERB Req?		Board Held?			Closure		
			Y	N	Y	N	N/A	AI	ENG.	OCE
G	06-314	OCO ICD Review	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	06-328	OCO Umbilical Harness Modification	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	07-189	Taurus T8/T9 MUPDR (Ballast Ring)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	07-190	Taurus T8/T9 MUCDR (Ballast Ring)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	07-191	Taurus T8/T9 MUSAR (Ballast Ring)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	07-302	T-0 Purge for Glory & OCO Missions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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OCO - Vehicle ERB Status

Jim Hoffman

LAUNCH SERVICES PROGRAM

R/Y/G	ERS #	TITLE	ERB Req?		Board Held?			Closure		
			Y	N	Y	N	N/A	AI	ENG.	OCE
G	07-113	Safe & Arm (New Build) Process Review	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
G	07-325	Taurus XL Core Fleet: Coupled Loads IV&V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	07-328	Taurus XL Core Fleet : 7Ah Avionics Battery, Taurus First Flight, OCO/Glory	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	08-14	Taurus XL Core Fleet: Taurus XL Upper stage Thermodynamics IV&V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	07-361	Hot Gas Generator Addition of Debris Catcher (fairing sep, TB first flight)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	08-12	Taur Peg XL Core Fleet: Marotta Regulator Oscillations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Y	08-151	NTS Santa Clarita Pyroshock Testing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	08-139	Taurus XL Stg-2 Inclination Targeting	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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OCO - Launch Site

Julie Schneringer

LAUNCH SERVICES PROGRAM

	May	Jun	Jul
LSSP	G	G	G

LSSP	Planned	Released
Preliminary	07/2007	08/27/2007
Baseline	08/01/2008	

	May	Jun	Jul
CUSTOMER INPUTS	G	Y	G

DELIVERABLES	May	Jun	Jul
Security and Badging	G	G	G
Training and Personnel Cert	G	G	G
Contingency Plans	G	G	G
Safety LSIM	G	G	G
Radiation Control	G	G	G
Operational Plans	G	G	G

UNIQUE REQUIREMENTS

	May	Jun	Jul
LAUNCH SITE UNIQUE	G	G	G
Encapsulation in PPF	G	G	G
PPF	G	G	G
Commercial PPF	G	G	G
Spacecraft OPS	G	G	G
Fueling	G	G	G

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OCO Budget Breakdown

Ken Carr

LAUNCH SERVICES PROGRAM

The launch service budget includes:

* **Launch Services**

- Standard launch Vehicle Services provided by this contract. This line item is firm fixed price and has no flexibility.
-
-

* **Mission Uniques**

- Requirements necessary to customize basic vehicle hardware to meet unique s/c driven requirements.
- Other services directly attributable to the mission.
- Contains some flexibility except when technical risk is affected. Spacecraft requirements are the cost driver.

* **Integrated Services**

- LSP contractor support service (ELVIS, CAPPs, JBOSC, KICs, etc).
- USAF range costs attributable to the mission
- Limited flexibility

* **Payload Processing Facility**

- Government facility: spacecraft customers are required to be processed in a government facility if the mission is planetary or has nuclear requirements
- Commercial facility: all other missions have been directed to process in a commercial facility;
- Contains some budget flexibility. Additional spacecraft cleanliness requirements or hazardous requirements may increase PPF costs.

* **Telemetry**

- Assets required to meet minimum launch vehicle telemetry requirements.
- Includes fixed and deployable ground stations, instrumented aircraft, and ocean assets.
- Limited flexibility requirements are often set late in the integration cycle.

* **Fly Out**

- Costs that each mission in the 19-Pack must incur.
- Long lead material procurement to mitigate risks due to gaps in production and supplier orders.
- Post-production support for labor skill retention, procure, manufacture, store and maintain under configuration control, mission critical spare parts.
- Pad Sustainability costs for SLC-2 and SLC-17.
- No flexibility-contract costs

* **Nuclear**

- RTG/RHU processing
- RTG/RHU databooks and approval
- Limited flexibility

* **Reimbursable**

- Reimbursable FC for transportation, labor, and CMO.

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^a **Mission Flexibility**

- Portion of the mission budget available for funding additional task assignments, non-standard services or meeting unexpected requirements.



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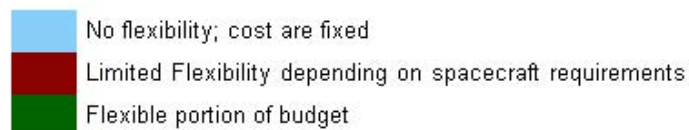
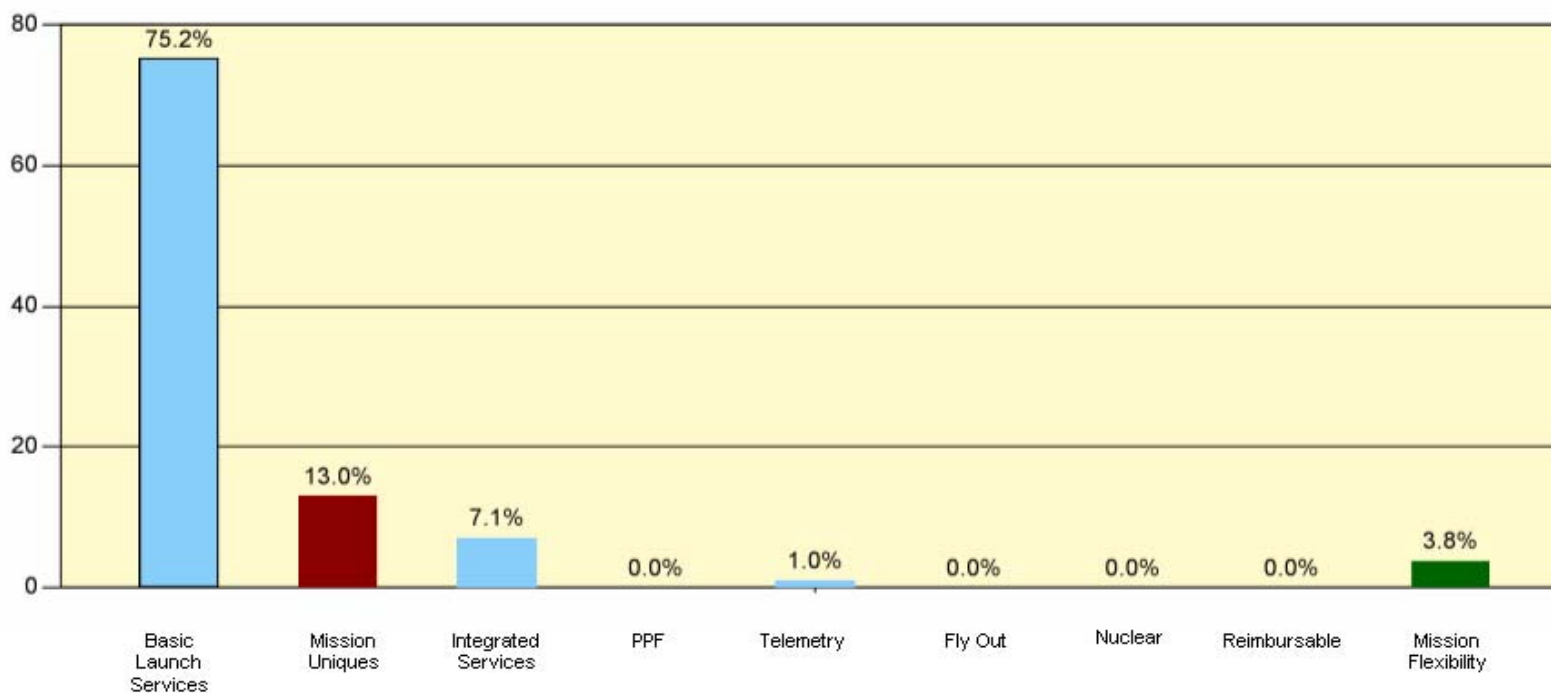
Launch Services Budget Breakdown

OCO Mission

Ken Carr

LAUNCH SERVICES PROGRAM

% of Total Launch Service Cost - 7 / 2008



Notes:

Variance: Mission Flexibility reduced from 3.2% to 2.9% due to added costs from the LEV Power Upgrade, GSE Contingency Faring Doors, and Spacecraft Environmental Test Support.

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OCO - Business

Ken Carr

LAUNCH SERVICES PROGRAM

Budget

Contracts

May	Jun	Jul
G	G	G
G	G	G

Milestone	Date
Milestone 1A	11/15/2003
Milestone 1B	11/15/2004
Milestone 1C	11/15/2004
Milestone 1D	8/1/2005
Milestone 2A	10/15/2005
Milestone 2B	11/15/2005
Milestone 2C	02/15/2006
Milestone 2D	02/15/2006
Milestone 2E	10/15/2006
Milestone 3A	11/15/2006
Milestone 3B	11/15/2006
Milestone 4	04/15/2007
Milestone 5	08/15/2007
Milestone 6	06/15/2008
Milestone 7	09/15/2008
Milestone 8	11/15/2008
Milestone 9	02/15/2009

<input type="checkbox"/>	Open Milestone Payment
<input type="checkbox"/>	Paid Milestone

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Contract Status				
Launch Services				
Contract Mod	Number	Description		
	Mod 10	Launch delay from 08/13/2007 - 09/15/2008 and Softride addition		
	Mod 17	Test Payload Adapter Fitting support		
	Mod 24	Addition of non-standard services: Umbilical harness,Test Isolators & Instrument Purge		
	Mod 31	Ballast Ring for launch vehicle		
	Mod 34	Isolator Delta Qual Testing		
	Mod 36	Launch Delay from 9/15/08 to 12/15/08		
There are no LD Contract Mods				
Task Assignments	Number	Description	Completion Date	Invoice Paid Date
	SP-24.001	Soft-Ride coupled loads analysis using XL environment	12/23/2005	
	SP-24.002	Upper stage motor production hold (non-mission funds)	10/7/2005	
	SP-24.003	RF/EMI compatibility study	12/15/2006	
	SP-24.004	Payload CDR Support	8/31/2006	
	SP-24.005	Umbilical connector test support	4/6/2007	
	SP-24.006	Trajectory Feasibility Study	2/28/2007	
	SP-24.007	OCO Environmental Test Support	Active	
Contract Mod (PPF)	Number	Description		
	NNK07LA79B	OCO Payload Processing Facility Task Order		
There are no Other Contract Mods				
	Issues			
G	Launch Delay Rate increase at L-180 days to \$12K/day - 30 days of grace remain			



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OCO - Safety and Mission Assurance

Laura McDaniel

LAUNCH SERVICES PROGRAM

Assurance Verification Areas	Status		Evidence of Completion	May	Jun	Jul
	Complete	In Work				
Quality				Y	Y	Y
Software / Hardware Problems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The Taurus vehicle is under certification efforts by LS SMA and NASA LSP. Due to outstanding Data Requests for Taurus vendors from previous site visits, all hardware and software fabrication operations are not fully certified.	Y	Y	Y
Alerts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues	G	G	G
Audits/Inspections/Surveillances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	SMA continuing to follow the closure of the MDA audit findings against Pac Sci.	G	Y	Y
Limited Life Items	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues	G	G	G
Reliability				G	G	G
FMEA/Fishbones/Equivalent	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Failure analyses assessments have been initiated along with vehicle certification planning	G	G	G
Reliability Assessments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The revised DRR was expected before 6/15/08.	G	G	G
Safety				G	G	G
Requirements Definitions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	EWR 127-1 Requirements Checklist - Completed. Out for Review.	G	G	G
Range Safety & Mission Flight Rules	<input type="checkbox"/>	<input checked="" type="checkbox"/>	In Work (Range Safety)	G	G	G
Licenses/Use Authorizations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	In work	G	G	G
Safety Documentation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Expect final MSPSP to be delivered early September.	G	G	G
Non-compliances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	S/C: Range Safety Waiver to be written for spacecraft contingency offload; ELV Risk M0281 submitted for OCO & Glory (Taurus).	G	G	G
Contingency Planning	<input type="checkbox"/>	<input checked="" type="checkbox"/>	OCO Contingency Off-load Plan being drafted.	G	G	G
Mission Assurance				G	G	G
Lessons Learned	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No previous NASA Taurus missions - Other KSC LLs will be reviews/addressed	G	G	G
First Flight/Mission Unique items	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Certification Effort in work	G	G	G
Test/Qualification/Certification	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Certification Effort in work	G	G	G
Mission Assurance Assessments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues	G	G	G
Risk Management	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Risk Management System is working properly	G	G	G

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OCO Comm & Telemetry

Ralph Mikulas and Nathan Wood

LAUNCH SERVICES PROGRAM

Communications

Voice Comm
Data Comm
Networks
Video Comm
Timing
RF Comm
LSSP Comm Annex

May	Jun	Jul
G	G	G
0	0	G
0	0	G
0	0	G
0	0	G
0	0	G
0	0	G
0	0	G

Telemetry

Decommuration Tables
Data Integrity Test
Software Lockdown
Software Inventory
Console Configuration
Console Checkout

May	Jun	Jul
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

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